NATOPS GENERAL FLIGHT AND OPERATING INSTRUCTIONS

OPNAV INSTRUCTION 3710.7Q

THIS MANUAL SUPERSEDES OPNAV INSTRUCTION 3710.7P
DATED 1 DECEMBER 1992

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS

1 MAY 1995

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, D.C. 20350-2000

IN REPLY REFER TO

OPNAVINST 3710.7Q
N889J3
1 May 1995

OPNAV INSTRUCTION 3710.7Q

From: Chief of Naval Operations

Subj: NATOPS GENERAL FLIGHT AND OPERATING INSTRUCTIONS

Encl: (1) NATOPS General Flight and Operating Instructions

1. Purpose. To issue enclosure (1) which provides policy and procedural guidance applicable to a broad spectrum of users and is designed to complement individual NATOPS manuals. This instruction is a complete revision and should be read in its entirety.

2. Cancellation. OPNAVINST 3710.7P.

3. Background. The Naval Air Training and Operating Procedures Standardization (NATOPS) Program is a positive approach toward improving combat readiness and achieving a substantial reduction in the aircraft mishap rate. Standardization, based on professional knowledge and experience, provides the basis for development of sound operating procedures. The standardization program is not intended to stifle individual initiative, but, rather, to aid commanding officers in increasing their unit's combat potential without reducing command prestige or responsibility.

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5. Instructions. All instructions that are cited in the text are listed (with their current suffixes) in Appendix C.

6. Reports and Forms. Reports and forms required by this instruction are listed on page xxix and xxx.

B. M. BENNITT
Director, Air Warfare

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The following Interim Changes have been canceled or previously incorporated in this manual:

INTERIM CHANGE NUMBER(S)	REMARKS/PURPOSE
1 thru 16	Previously Incorporated

The following Interim Changes have been incorporated in this Change/Revision:

INTERIM CHANGE NUMBER(S)	REMARKS/PURPOSE
17	Cabin Seating Requirements
18	External Lighting Requirements When Using NVDs

Interim Changes Outstanding – To be maintained by the custodian of this manual:

INTERIM CHANGE NUMBER	ORIGINATOR/DATE (or DATE/TIME GROUP)	PAGES AFFECTED	REMARKS/PURPOSE

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LIST OF FORMS AND REPORTS

FORMS

The following forms may be obtained through normal Navy supply channels in accordance with NAVSUP PUBLICATION 2002, Navy Stock List of Publications and Forms, except as noted otherwise.

Aviators Flight Log Book, OPNAV 3760/31 (4-65), S/N 0107-LF-736-2001

Clearance for Nonmilitary/Nonaircrew Personnel to Fly in USN/USMC Aircraft, OPNAV 3710/18 (3-95), S/N 0107-LF-019-4600

Clearance Notice (Aeromedical), NAVMED 6410/2 (5-90), S/N 0105-LF-010-1700

Flight Weather Briefing, DD-175-1 (9-89), S/N 0102-LF-008-4200

Grounding Notice (Aeromedical), NAVMED 6410/1 (5-90), S/N 0105-LF-010-1600

Military Flight Plan, DD 175 (5-86) S/N 0102-LF-001-7500

NATOPS Tactical Change Recommendation, OPNAV 3710/6 (4-90), S/N 0107-LF-009-7900

NATOPS Evaluation Report, OPNAV 3710/7 (4-90), S/N 0107-LF-009-8000

NATOPS Flight Personnel Training and Qualification Jacket, OPNAV 3760/32 (4-81), S/N 0107-LF-736-2112

NATOPS Instrument Rating Request, OPNAV 3710/2 (1-74) S/N 0107-LF-728-2903

Naval Aircraft Flight Record, OPNAV 3710/4, (2-84), S/N 0107-LF-037-1020

Mission Qualification Record, OPNAV 3760/32D (Rev 4-90), S/N 0107-LF- 009-7500

School/Course Attendance Record, OPNAV 3760/32E (Rev 4-90), S/N 0107-LF -009-7600

Operational Physiology and Survival Training, OPNAV 3760/32F (Rev 4-90), S/N 0107-LF-009-7700

Examination Record, OPNAV 3760/32G (Rev 4-90), S/N 0107-LF-009-7800

Review and Certificate Record, OPNAV 3760/32A (Rev 4-81), S/N 0107-LF- 736-2120

Record of Flight Equipment Issue, OPNAV 3760/32B (Rev 4-81), S/N 0107-LF-736-2130

Flight Personnel Designation Required, OPNAV 3760/32C (Rev 4-81), S/N 0107-LF-736-2140

Mishap/Flight Violation Record, OPNAV 3760/32H (Rev 4-81), S/N 0107-LF-736-2190

Flight Jacket Divider Tabs, OPNAV 3760/32I (Rev 4-81), S/N 0107-LF-000-7500

Record of Disclosure - Privacy Act of 1974, OPNAV 5211/9 (Rev 3-92), S/N 0107-LF-013-8400

Aircraft Inspection and Acceptance Record, OPNAV 4790/141 (Rev 12-89), S/N 0107-LF-008-4600

Record of Completed Flight Time, OPNAV 3760/37 (Rev 9-74) S/N 0107-LF- 037-6185

Special Duty Medical Abstract, BUMED 6150/2 (7-81), S/N 0105-LF-209-5021

Weight and Balance Clearance Form F, DD 365-4 (4-89), S/N 0102-LF-002-9900

Air Transportation Agreement, DD 1381 (7-62) — contact local NPPS office for local print-on-demand

FAA 7233-1 — procure at nearest FAA General Aviation District Office

CNATRAGEN 3760/3A — Chief of Naval Air Training, NAS, Corpus Christi, TX 78419

Records Transmittal and Receipt, SF-135 (7-85), NSN 7540-00-634-4093 is stocked at Federal Supply Systems

Report of Medical Examination, SF 88 (3-89), S/N 7540-00-634-4038 is stocked at the General Services Administration.

LIST OF ABBREVIATIONS/ACRONYMS

A

ABI. Aviation billet indicator.

ACIP. Aviation career incentive pay.

ACLS. Automatic carrier landing system.

ACM. Air combat maneuvers.

ACP. Allied communication publication.

ACT. Aircraft commander time; aircrew coordination training.

ADIZ. Air defense identification zone.

ADMAT. Administrative material inspection.

AEW. Airborne early warning.

AIA. Aircraft inspection and acceptance.

ALSS. Aviation life support system.

AME. Aviation medical examiner.

AMO. Aviation medical officer.

AMSO. Aeromedical safety officer.

AOA. Angle of attack.

ARCP. Air refueling control point(s).

ARTCC. Air route traffic control center.

ASED. Aviation service entry date.

ASEP. Aircrew survivability enhancement program.

ASI. Aviation status indicator.

ASW. Antisubmarine warfare.

ATC. Air traffic control.

ATCAA. Air traffic control assigned airspace.

ATP. Allied tactical publication.

B

BuNo. Bureau number.

BUPERS. Bureau of Naval Personnel.

BVA. Best visual acuity.

C

CAD. Collective address designator.

CANDE. Computer-aided NAVFLIRS data entry.

CAP. Combat air patrol.

CBR. Chemical, biological, and radiological.

CCA. Carrier-controlled approach.

CG FOURTH MAW. Commanding General, 4th Marine Air Wing.

CMC. Commandant of the Marine Corps.

CNET. Chief of Naval Education and Training.

CNI. Communication, navigation, identification.

CNO. Chief of Naval Operations.

CO. Commanding officer.

COD. Carrier onboard delivery.

COMMARFORLANT. Commander, U.S. Marine Forces, Atlantic.

COMMARFORPAC. Commander, U.S. Marine Forces, Pacific.

COMNAVAIRESFOR. Commander, Naval Air Reserve Force.

COMNAVAIRLANT. Commander Naval Air Force, U.S. Atlantic Fleet.

COMNAVAIRPAC. Commander Naval Air Force, U.S. Pacific Fleet.

HWD. Horizontal weather depiction.

I

ICAO. International Civil Aviation Organization.

ICS. Intercommunication system.

IFARS. Individual flight activity reporting system.

IFF. Identification friend or foe.

IFR. Instrument flight rules.

IMC. Instrument meteorological conditions.

IMR. Individual master roster.

IT. Instructor time.

J

JANAP. Joint Army, Navy, Air Force publication.

K

KIAS. Knots indicated airspeed.

L

LEO. Law enforcement official.

LIMDU. Limited duty.

LSO. Landing signal officer.

M

MAP. Military assistance program.

MARSA. Military assumption of responsibilities for separation of aircraft.

MCT. Mission commander time.

MDA. Minimum descent altitude.

MDS. Maintenance data system.

MEDEVAC. Medical emergency evacuation.

MIFAR. Monthly individual flight activity report.

MIM. Maintenance instruction manual.

MITO. Minimum interval takeoff.

MOA. Military operating areas.

MOF. Month(s) operational flying.

MRU. Military radar unit.

MSL. Mean sea level.

MWA. Military weather advisory.

N

NA. Naval aviators.

NAC. Naval air crewman.

NALIS. Navy logistics information system.

NAMT. Naval air maintenance trainer.

NAPTP. Naval aviation physiology training program.

NATOPS. Naval air training and operating procedures standardization.

NATRACOM. Naval Air Training Command.

NAVAEROPMEDINST. Naval Aerospace Operational Medical Institute.

NAVAIRTECHSERVFAC. Naval Air Technical Services Facility.

NAVAVNDEPOTs. Naval aviation depots.

NAVAVSCOLSCOM. Naval Aviation Schools Command.

NAVREP. Navy representative.

NAVTACSUPPACT. Navy Tactical Support Activity.

NAWS. Naval aviation water survival.

NAWSTP. Naval aviation water survival training program.

NCR. No carbon required.

NEC. Naval enlisted classification.

NFO. Naval flight officer.

NJROTC. Naval Reserve Junior Officer Training Corps.

UIC. Unit identification code.

V

VFR. Visual flight rules.

VIP. Very important person.

VMC. Visual meteorological conditions.

V/STOL. Vertical/short takeoff and landing.

VTOL. Vertical takeoff and landing.

W

WST. Weapon system trainer.

WW. Weather watch.

CHAPTER 1

Introduction

1.1 GENERAL

The Naval Air Training and Operating Procedures Standardization (NATOPS) program is a positive approach towards improving combat readiness and achieving a substantial reduction in aircraft mishaps. This instruction issues policy and procedural guidance of the Chief of Naval Operations (CNO) that is applicable to all NATOPS users.

1.1.1 Purpose and Scope

a. This instruction prescribes general flight and operating instructions and procedures applicable to the operation of all naval aircraft and related activities. This instruction is not intended to cover every contingency that may arise nor every rule of safety and good practice. To achieve maximum value, the contents of all directives cited must be studied and understood. Routine interpretation and procedural questions should be referred to type wing/type command NATOPS offices for resolution prior to referral to CNO. Where the need arises, special instructions or waivers will be issued by CNO.

b. In the tactical environment, military exigency may require on-site deviations from instructions/procedures contained here. Deviation from specified flight and operating instructions is authorized in emergency situations when, in the judgment of the pilot in command, safety justifies such a deviation.

c. It is often not feasible to completely specify all situations or circumstances under which provisions of this instruction shall apply; therefore, wording such as "normally," "etc.," "usually," and "such as" is employed. Words or clauses of that type shall not be used as loopholes nor shall they be expanded to include a maneuver, situation, or circumstance that should not be performed or encountered by the aircraft in question.

d. To increase combat readiness and improve flight safety, the scope and operation of the NATOPS program, conduct of NATOPS evaluations, urgent and routine change procedures to NATOPS publications, and NATOPS review conference procedures are discussed in Chapter 2.

1.1.2 Change Procedures. Recommended changes to this and other NATOPS publications may be submitted by anyone in accordance with Chapter 2 of this instruction. Recommended changes to this instruction shall be submitted to CNO (N889J), 2000 Navy Pentagon, Washington, DC 20350-2000.

1.1.3 Change Symbols. Revised text is indicated by a black vertical line in either margin of the page, adjacent to the affected text, like the one printed next to this paragraph. The change symbol identifies the addition of new information, a changed procedure, the correction of an error, or a rephrasing of the previous material.

1.1.4 Waiver Requests. Figure 1-1 delineates areas of responsibility within CNO (N88) for this instruction. Waiver requests should be sent to the applicable N code.

1.1.5 How To Get Copies

a. Automatic Distribution — To automatically receive future changes and revisions to this instruction, a unit must be established on the automatic distribution list maintained by CNO. To become established on the list or to change distribution requirements, notify in writing CNO (N889J), 2000 Navy Pentagon, Washington, DC 20350-2000.

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NOTAMs are mandatory for all pilots flying naval aircraft.

1.2.5 FAA Handbook 7110.65 (Air Traffic Control (NOTAL)). The FAA handbook is applicable to air traffic control by Department of Defense (DOD) activities unless individual military service exceptions are noted there. The applicable procedures shall be used by naval aviation shore facilities when performing air traffic control (ATC) functions. Waivers for deviations from the procedures set forth in 7110.65 may be granted by CNO (N885F). Authority for reduced same runway separation for arriving and departing aircraft using the same runway is outlined in paragraph 6.3.1.

1.2.6 NATOPS Air Traffic Control Facilities Manual (NAVAIR 00-80T-114). This manual is applicable for the operation of Navy and Marine Corps air traffic control facilities. Applicable procedures shall be used by shore facilities when performing ATC functions.

1.2.7. Other Instructions. Special instructions are listed in Appendix C.

1.3 EXPLANATION OF TERMS

The explanation or definitions of terms and abbreviations commonly used in the aviation community can be found in FAR, Part 1, and DOD FLIP General Planning, Chapter 2. No effort to duplicate these terms is intended. Where terms are used in this instruction with a different connotation or where definitions are lacking in the above-mentioned publications, the explanations of such terms are included.

1.3.1 Actual Instrument Approach. When actual instrument conditions are encountered below 1,000 feet above the airport/flight deck elevation during an instrument approach.

1.3.2 Actual Instrument Conditions. Conditions external to the aircraft in flight that do not permit visual reference to the horizon.

1.3.3 Aerobatic Flight. An intentional maneuver involving an abrupt change in aircraft attitude, intentionally performed spins, or other maneuvers requiring pitch/dive angles greater than 45°, bank angles greater than 60°, or accelerations greater than 2g's. A "break" maneuver that conforms to the model NATOPS manual is not considered to be aerobatic flight.

1.3.4 Aeronautically Designated Personnel. A collective term that applies to all naval aviators, naval flight officers, naval aerial observers (USMC), naval flight surgeons, naval aerospace physiologists, naval aerospace experimental psychologists, aviation antisubmarine warfare operators (AW rating), personnel assigned by the Chief of Naval Personnel under a distribution Naval Enlisted Classification (NEC) of 82XX, and USMC-enlisted crewmembers. Enlisted noncrewmembers are not considered aeronautically designated.

1.3.5 Aircraft Class. A broad classification as to the general mission purpose of an aircraft design (i.e., attack, fighter, helicopter, patrol, transport, vertical takeoff and landing).

1.3.6 Aircraft Commander Time (ACT). The individual flight time during which an individual, designated as a qualified aircraft commander in the aircraft model being flown, is serving as pilot in command. Aircraft commander time is a measure of command experience rather than of pilot experience.

1.3.7 Aircraft Model. The basic mission symbol and design number (i.e., P-3, S-3, F-14, H-3, A-6).

1.3.8 Aircraft Series. The collective group of all aircraft of the same type and model (i.e., AV-8A or B; KC-130F, R, or T; CH-53A, D, or E; EA-6A or B).

1.3.9 Aircraft Type. The broadest classification of aircraft as to physical characteristics (i.e., fixed wing or rotary wing).

1.3.10 Aircrew. A collective term that applies to all categories of personnel in a flight status either as crew or noncrewmember.

1.3.11 Bolter. An attempted arrested landing on a carrier in which some portion of the aircraft, such as the landing gear or hook, touches the deck but the arresting gear is not engaged and the aircraft continues in flight.

1.3.12 Computer Aided NAVFLIRS Data Entry (CANDE). CANDE is a CNO/Commander, Naval Air Systems Command (COMNAVAIRSYSCOM)-authorized automated program designed to provide support to squadron personnel for accurate completion of the NAVFLIRS form (OPNAV 3710/4). It allows squadron personnel to input preflight and postflight data into the program that will generate a data diskette for processing at the local data service facility (DSF) and hard-copy facsimiles for the master flight file and the maintenance analyst.

1.3.13 Civilian Aircrew. Civilian personnel who perform flight duties on a routine basis related to the

1.3.28 Flight

a. For operational purposes, a flight is one or more aircraft proceeding on a common mission.

b. For record and reporting purposes, a flight begins when the aircraft first moves forward on its takeoff run or takes off vertically from rest at any point of support and ends after airborne flight when the aircraft is on the surface and either:

(1) The engines are stopped or the aircraft has been on the surface for 5 minutes, whichever comes first.

(2) A change is made in the pilot in command.

c. For helicopters, a flight begins when the aircraft lifts from a rest point or commences ground taxi and ends after airborne flight when the rotors are disengaged or the aircraft has been stationary for 5 minutes with rotors engaged.

Note

Flight time on repetitive evolutions such as field carrier landing practice (FCLP), passenger/cargo stops, and carrier qualifications shall be logged from the time the aircraft takes off until the aircraft has been on the surface for 5 minutes after each evolution flown (i.e., three sorties of 55 minutes actual air time interspersed with two 20-minute ground periods for refueling or passenger/cargo transfer will be logged as 3.0 hours of flight time).

1.3.29 Flightcrew. Personnel whose presence is required on board an aircraft to perform crew functions in support of the assigned mission (i.e., copilot, bombardier/navigator, flight mechanic, air observer, special crew, trainee, etc.).

1.3.30 Flight Time. The elapsed time computed in accordance with the definition of flight. Flight time is logged in hours and tenths of hours and is creditable to the aircraft, personnel aboard, and equipment.

1.3.31 Formation Flight. A flight of more than one aircraft operating by prior arrangement as a single aircraft with regard to altitude, navigation, and position reporting, and where separation between aircraft within the flight rests with the pilots in that flight.

1.3.32 Frequent Flyer. All nonaircrew (i.e., flag officers, embarked staff/ship personnel, doctors, dentists, chaplains, etc.) whose duty assignments necessitate frequent overwater flights.

1.3.33 Individual Flight Time. The total pilot time and special crew time creditable to an individual.

1.3.34 Instructor. A naval aviator, naval flight officer, or naval air crewman designated in writing by competent authority as a flight instructor, NATOPS evaluator, or NATOPS instructor in the aircraft model being flown.

1.3.35 Instructor Time (IT). Individual flight time during which an instructor is required to instruct or evaluate other aeronautically designated personnel or students undergoing a formal flight syllabus.

1.3.36 Instrument Meteorological Conditions (IMC). Meteorological conditions expressed in terms of visibility, distance from clouds, and ceiling less than the minimums specified for visual meteorological conditions. IMC conditions exist anytime a visible horizon is not distinguishable.

1.3.37 Instrument Time. The portion of pilot time in either day or night under actual or simulated instrument conditions.

a. Actual instrument time will be logged by both pilots in a dual/multipiloted aircraft during flight in actual instrument conditions.

b. Simulated instrument time shall be logged only by the pilot actually manipulating the controls.

Note

NFOs and student NFOs may report actual instrument time if they fly in an aircraft in which they can monitor the pilot instruments and recommend information to the pilot during actual instrument conditions.

1.3.38 Landing. A return to the surface; landings include touch and go (providing the landing gear touches the surface), bolter, or forced or crash.

Note

Terms of control terminology such as immediately, possible, and practicable refer to the degree of urgency intended in the message:

a. Land immediately — Self-explanatory.

access to the flight controls and is exercising principal active control of the aircraft.

1.3.56 Copilot Time (CPT). The portion of pilot time while assisting the pilot exercising principal active control of a multipiloted aircraft during which the copilot is positioned with access to and is immediately ready to operate the flight controls; or, in those aircraft with only one set of flight controls, that portion of flight time while instructing the pilot who is exercising principal active control when the designated instructor is positioned so that pilot and aircraft instruments can be observed. Aeronautically designated personnel may log CPT while performing copilot duties as required by the aircraft mission.

1.3.57 Pilot Under Instruction. A designated aviator under instruction.

1.3.58 Project Specialist. An individual embarked in a Government aircraft not equipped with ejection seats and/or personal oxygen system (excluding emergency oxygen systems) for the purpose of operating aircraft systems or specially designed equipment, or other than equipment operation, and who is not responsible for normal aircrew duties. The project specialist employment does not require project specialists to fly on a routine basis but will occasionally require their expertise in flight.

1.3.59 Qualified in Model. A designation that indicates the minimum requirements for qualification in a specific crew position, as set forth in the appropriate NATOPS manual, have been attained. Such designations are a one-time occurrence (per unit/command tour) and remain in effect until removed for cause. Annual NATOPS evaluations should not be confused with or combined with these designations. If specific aircraft model NATOPS guidance is lacking, an individual shall be considered "qualified in model" for specific crew position when so designated by the reporting custodian.

1.3.60 Reporting Custodian. An organizational unit of the lowest echelon of command accepting responsibility (involving accountability to CNO) for aircraft as designated either by CNO or by the controlling custodian of the aircraft.

1.3.61 Selected Passengers. A person traveling in an aircraft who is not part of the assigned flightcrew and who is:

a. A passenger on an aircraft equipped with ejection seats and/or personal oxygen systems (excluding emergency oxygen systems).

b. A military member or civilian employee of DOD or a contractor to DOD embarked for the purpose of performing a crew duty, such as operating installed equipment or observing aircraft or crew performance when required in connection with assigned duties or contractual responsibilities. Passengers in cargo/transport aircraft, embarked for transportation only, are not selected passengers.

1.3.62 Simulated Instrument Approach. An instrument approach flown under simulated instrument conditions.

1.3.63 Simulated Instrument Conditions. Conditions external to the aircraft in flight are visual meteorological conditions (VMC), but pilot vision is limited primarily to the interior of the aircraft.

1.3.64 Single-Piloted Aircraft. Any aircraft that has only one set of flight controls or any aircraft that has two sets of flight controls and instruments and is being operated by only one pilot who meets the requirements of the NATOPS manual for that model aircraft.

1.3.65 Special Crew Time (SCT). The portion of flight time accrued while not acting as first pilot or copilot, but otherwise serving as a member of the authorized crew complement of an aircraft or as a student in flight training.

1.3.66 Special Mission Personnel. Military or civilian personnel on competent flight orders whose duties require frequent and regular participation in aerial flights to perform in-flight functions such as installation, maintenance, or evaluation of airborne technical equipment (maintenance skins), very important person (VIP) support, communication specialists, photo specialists, etc.

1.3.67 Special Operations Personnel. Personnel that are required to conduct special operations such as high-altitude parachuting from military aircraft (SEALS, ANGLICO, RECON, etc.).

1.3.68 Stereo Route. Routinely used route of flight established by users and ARTCC identified by a coded name (e.g., ALPHA 2). These routes simplify flight plan handling and communications.

CHAPTER 2

Naval Air Training and Operating Procedures Standardization Program

2.1 GENERAL

2.1.1 Purpose. To issue NATOPS program organization, procedures, and responsibilities.

2.1.2 Definitions

a. NATOPS Advisory Group — The NATOPS advisory group is composed of the following (and other commands as designated by CNO):

Chief of Naval Operations (CNO)
Commandant of the Marine Corps (CMC)
Commander, Naval Air Systems Command (COMNAVAIRSYSCOM)
Commander, Naval Air Force, U.S Pacific Fleet (COMNAVAIRPAC)
Commander, Naval Air Force, U.S. Atlantic Fleet (COMNAVAIRLANT)
Chief of Naval Air Training (CNATRA)
Commander, U.S. Marine Forces Atlantic (COMMARFORLANT)
Commander, U.S. Marine Forces Pacific (COMMARFORPAC)
Commander, Naval Air Reserve Force (COMNAVAIRESFOR)
Commanding General, 4th Marine Aircraft Wing (CG FOURTH MAW)
Commander, Naval Safety Center (COMNAVSAFECEN)

b. NATOPS Program Administrator — The Director, Air Warfare Division (N88) has overall cognizance for the NATOPS program. The Head, Aviation Manpower and Training Branch (N889) has been delegated responsibility for the program's administration and management.

c. CNO NATOPS Coordinators — Aviators/naval flight officers (NFOs) who manage all aspects of NATOPS publication production for CNO (N889J). They are permanently assigned to the Navy Tactical Support Activity (NAVTACSUPPACT) WNY, Washington, DC and represent CNO at NATOPS review conferences.

d. NATOPS Coordinator — An aviator/NFO possessing broad experience in current operational aircraft, assigned to NATOPS coordination duties at the headquarters of advisory group members.

e. Cognizant Command — An advisory group member responsible for specific portions of the NATOPS program as designated by CNO (N889J). Cognizant command assignments are delineated in the NATOPS status report issued by NAVTACSUPPACT.

f. Model Manager Command — That command designated by the cognizant command to administer the NATOPS program for a specific aircraft model or aircraft-related system. These assignments are delineated in the NATOPS status report issued by NAVTACSUPPACT. The commanding officer of an assigned model manager command is the model manager.

g. NATOPS Program Manager — An officer assigned by the model manager who performs administrative responsibilities for the NATOPS program and who is given written authority to act on behalf of the model manager in NATOPS-related matters. The program manager shall be highly qualified in model and should be assigned these responsibilities for a minimum of 18 months.

h. NATOPS Evaluation Unit — A command designated by an advisory group member to conduct annual NATOPS evaluations of units assigned to that advisory group member.

i. NATOPS Evaluator — A highly qualified air crewmember assigned to a NATOPS evaluation unit who conducts annual unit NATOPS evaluations for an aircraft crew position. Designations

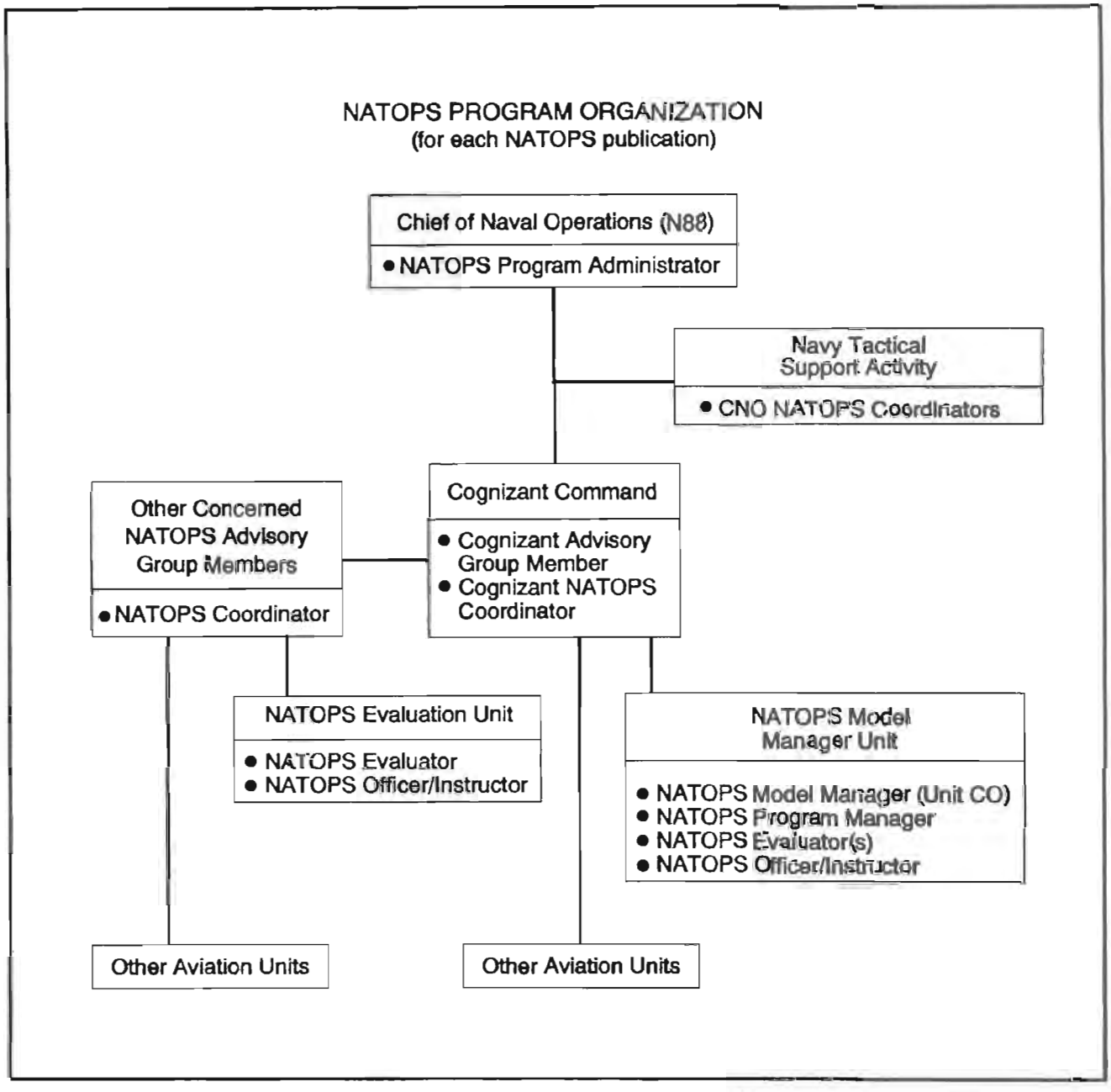


Figure 2-1. NATOPS Program Organization

(2) Cognizant Command — An advisory group member is assigned as a cognizant command for each model aircraft or NATOPS manual. The cognizant command convenes NATOPS review conferences and processes urgent change recommendations for that model aircraft or NATOPS manual.

d. Model Manager — The model manager shall review the assigned NATOPS publications to ensure that they contain the latest approved operating procedures and make appropriate recommendations to the cognizant command on all matters concerning the NATOPS manuals.

e. NATOPS Program Manager — The program manager shall conduct a continuous review of existing publications, including appropriate NATOPS manuals, maintenance instruction manuals (MIMs), handbooks of overhaul instructions (HOIs), Allied tactical publications (ATPs), naval warfare publications (NWPs), and associated instructions to discover any conflicts that might exist. When conflicts are discovered, the program manager shall

A copy of all waivers shall be forwarded to CNO (N889J) and to COMNAVSAFECEN (Code 11).

2.1.7 Report and Forms

a. Report symbol OPNAV 3710-21, "NATOPS Evaluation Report," (Figure 2-2) is approved for 3 years only from the date of this directive.

b. Copies of the NATOPS/Tactical Manual Change Recommendation/OPNAV 3710/6 (4-90), stock number 0107-LF-009-7900 (Figure 2-3), and of the NATOPS Evaluation Report, OPNAV 3710/7 (4-90), stock number 0107-LF-009-8000 (Figure 2-2), are listed in the NAVSUP Publication 2002D and are available as Cog "I" stock items that may be requisitioned from the Navy Publications and Forms Center.

2.2 NATOPS CHANGE PROCEDURES

2.2.1 General. NATOPS publications must have inputs from many sources to maintain the effectiveness of the program. Anyone in the naval establishment who notes a deficiency or an error is obliged to submit a change recommendation. Participation of the individual in this program of continual manual improvement is imperative. Procedures outlined here apply to all NATOPS manuals.

2.2.2 Definitions

a. Revision — A completely reprinted manual.

b. Change — A page change to an existing manual.

c. Interim Change — A change to a manual issued by rapid means. Normally these are sent out via message but they can also use normal printing processes and be sent via the mail system.

d. Advance Change — An advance change to a NATOPS publication consists of those vital items approved and designated by a NATOPS review conference for immediate issue by CNO as an interim change.

2.2.3 Change Recommendations. Change recommendations are either urgent or routine per the following:

a. Urgent change recommendations are those requiring immediate issuance of a change to prevent possible personnel hazard or serious equipment damage. If appropriate, include the phrase "safety of flight" in the subject line if the situation involves the fundamental airworthiness of the aircraft or operating procedures likely to place flight personnel in immediate danger. Transmission of urgent change recommendation messages is authorized during MINIMIZE.

b. Routine change recommendations are those intended to be included on the agenda of a formal NATOPS review conference. Routine change recommendations are sent to the appropriate model manager who will acknowledge receipt and make it a part of the next review conference agenda. If the change is approved at the conference, it will be incorporated in the next change or revision to the appropriate NATOPS publications.

2.2.4 Forwarding Recommendations

a. Urgent Change Recommendations (UCRs)

(1) UCRs and responses to them shall be sent by priority message whenever possible. UCRs that contain illustrations and/or extensive data should be forwarded by letter when messages cannot be fully exploited. Use of facsimile copy is strongly recommended to reduce both message transmission and mail delivery delays. The initial message on a subject shall be submitted to the advisory group member in the chain of command using the message format shown in Figure 2-4. NAVTACSUPPACT and the NATOPS Model Manager shall also be included as information addressees. When the change recommendation affects any aspect of emergency egress, rescue, or survival, Naval Aerospace and Operational Medical Institute (NAVAEROPMEDINST), the aviation training model manager for emergency egress, shall be included as an action addressee. UCRs that affect flying safety shall have the text "/SAFETY OF FLIGHT//" appended to the subject line.

(2) The advisory group member receiving the initial UCR message shall review the message for appropriateness and completeness and may cancel the UCR, downgrade the UCR to routine, or forward the UCR message for further review and approval. Incomplete UCRs should be returned/staffed to meet the required standards. If approved by the originating command's advisory group member, the recommendation shall, within 3 working days, be forwarded with modifications and comments to the cognizant command for the affected publication(s). Information addressees shall include all other advisory group members exercising operational control over the model

NATOPS/TACTICAL CHANGE RECOMMENDATION
OPNAV 3710/6 (4-90) S/N 0107-LF-009-7900

DATE _____

TO BE FILLED IN BY ORIGINATOR AND FORWARDED TO MODEL MANAGER

FROM (Originator)				Unit	
TO (Model Manager)				Unit	
Complete Name of Manual/Checklist	Revision Date	Change Date	Section/Chapter	Page	Paragraph

Recommendation (be specific)

☐ CHECK IF CONTINUED ON BACK

Justification

Signature	Rank	Title

Address of Unit or Command

TO BE FILLED IN BY MODEL MANAGER *(Return to Originator)*

FROM	DATE

TO

REFERENCE

(a) Your Change Recommendation Dated _____

☐ Your change recommendation dated _____ is acknowledged. It will be held for action of the review conference planned for _____ to be held at _____

☐ Your change recommendation is reclassified URGENT and forwarded for approval to _____ by my DTG _____ .

/S/ _____ MODEL MANAGER	_____ AIRCRAFT

Figure 2-3. NATOPS/Tactical Change Recommendation

aircraft involved or designated in the affected publication, COMNAVAIRSYSCOM, COMNAVSAFECEN, COMNAVAIRWARCENACDIV (Codes 5.5.1/5.5.3), NAVTACSUPPACT, and the model manager. The advisory group member shall forward the initial message when downgrading or canceling a UCR.

(3) COMNAVAIRSYSCOM has cognizance over all aircraft equipment limitations and technical data in NATOPS publications. The fleet has cognizance over all operating procedures, but must operate within the constraints of the technical limitations. NAVTACSUPPACT has cognizance over the content and specifications. Following receipt of a UCR that involves technical information, COMNAVAIRSYSCOM may issue it directly as an interim change provided that no operating procedures are involved. However, COMNAVAIRSYSCOM may issue such interim changes only after consultation with the cognizant command, the model manager, and NAVTACSUPPACT.

(4) Upon receipt of a UCR, the cognizant command shall request the comments of the other appropriate advisory group members, NAVTACSUPPACT, and the model manager. For cases that involve both technical information and operating procedures, COMNAVAIRSYSCOM shall provide approved technical information and any recommended procedures to the appropriate cognizant command, that shall in turn request comments from the members of the advisory group, NAVTACSUPPACT, and the model manager before recommending final action to CNO.

(5) Within 3 working days, action addressees shall forward concurrence, nonconcurrence, comments, or recommendations to the cognizant command, with the CNO, COMNAVAIRSYSCOM, COMNAVSAFECEN, NAVTACSUPPACT, and the model manager as information addressees (see Figure 2-5). Advisory group members who are unable to forward their nonconcurrence or concurrence (with or without modifications) within the allotted 3 working days shall forward to the cognizant command an interim report that includes the reason for the delay and an estimate of when their recommendation will be forthcoming.

(6) The cognizant command may cancel or downgrade the UCR or shall within 6 working days of initial notification by an advisory group member, submit a recommendation to CNO with NAVTACSUPPACT, the model manager, and others as appropriate as information addressees (see Figure 2-6).

(7) Upon receipt of the cognizant command's recommendation for issuance, NAVTACSUPPACT shall then prepare an interim change package that includes copies of the related messages and other correspondence, a marked-up copy of the publication showing the recommended change, and a draft copy with MTF diskette containing the interim change message. NAVTACSUPPACT shall forward the package to CNO (N889J) for approval and release.

(8) For NATOPS publications designated as "PRELIMINARY" publications, COMNAVAIRSYSCOM shall provide technical information and recommended operating procedures to the model manager, who, after consulting with NAVTACSUPPACT, may then modify the operating procedures as appropriate and issue the interim change without further administrative delay.

b. Routine Change Recommendations — Change recommendations classified as routine shall be forwarded to the appropriate model manager on form OPNAV 3710/6 (4-90) as shown in Figure 2-3. The model manager may elect to upgrade the classification to urgent and process the recommendation as outlined in paragraph 2.2.4a.

2.2.5 Change Identification

a. Revisions to NATOPS publications are dated on the title page.

b. Printed changes to NATOPS publications shall show the change date on the title page below the original publication or revision date. The change number shall be identified as a corner mark on the bottom of all changed pages.

c. Interim changes are numbered consecutively throughout the life of the NATOPS manual, regardless of subsequent changes or revisions. Interim changes can be canceled or modified by issuing another interim change. The interim change summary page in each NATOPS manual must be checked along with the NATOPS status report to determine if the manual contains the latest material.

1. CANCEL/DOWNGRADE TO ROUTINE/REQUEST ISSUE/REQUEST ISSUE AS MODIFIED BY ..... (As appropriate). (When the Cognizant Advisory Group Member and recommending final action)

2. (Enter remarks or comments necessary to substantiate the final recommended action. If no remarks are necessary, omit paragraph.) //

*** Show message routing code(s), or "JJJ" when required but not known. Most NATOPS Advisory Group routing codes are shown in the Urgent Change Recommendation/Interim Change section of the NATOPS and AIR TACMAN Combined Status Report and/or in subject publication.

* All Advisory Group Members concerned with the subject aircraft/equipment.

% Add phrase "/SAFETY OF FLIGHT" to subject line when appropriate.

Include additional references as necessary to provide a complete background on the change recommendation.

Figure 2-5. Sample GENADMIN Format Response to Initial NATOPS Urgent Change Recommendation Message (Sheet 2 of 2)

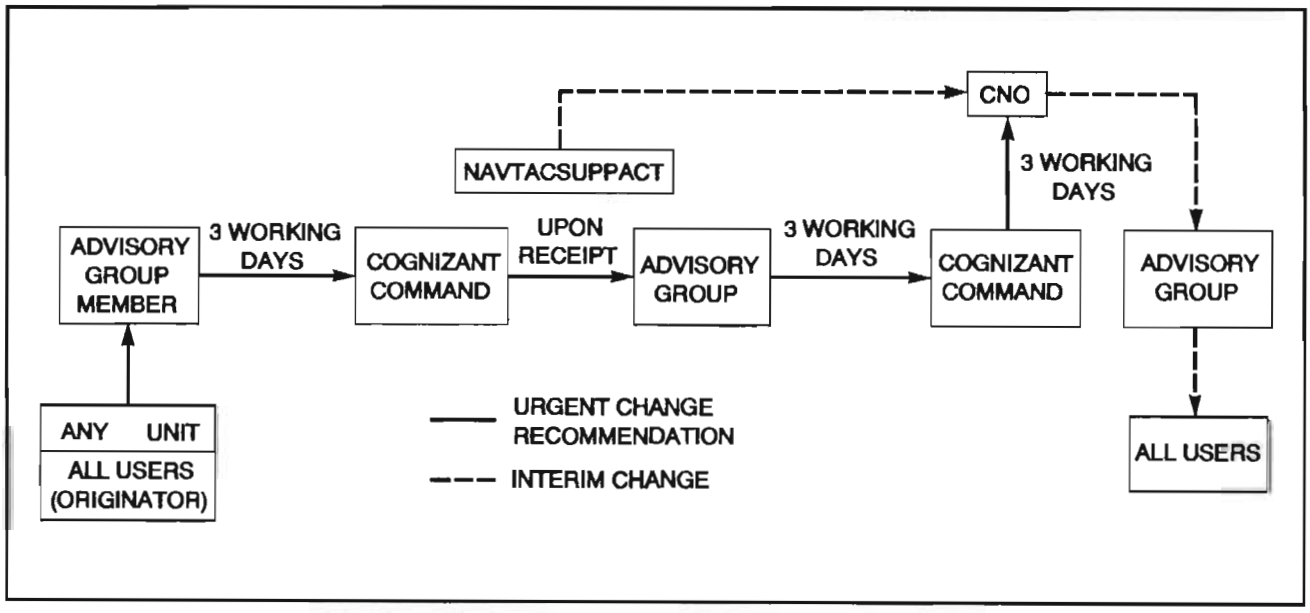


Figure 2-6. Urgent Change Recommendation Flow Chart

Note

NAVTACSUPPACT assigns all interim change numbers. When NAVAIR or a model manager of a Preliminary NATOPS manual issues an interim change, NAVTACSUPPACT shall be contacted to obtain the correct number.

d. Replacement pages that have been modified to incorporate message and/or printed interim changes that were not included in the latest printed change shall: (1) retain their printed change marking (e.g., ORIGINAL, CHANGE 1, CHANGE 2), and (2) be marked directly below the printed change marking with the number(s) of the interim change(s) (e.g., with IC 3, with IC 26 and 29) that modify them, as applicable.

e. Advance change items identified by NATOPS review conferences will be issued by CNO interim change message. NAVTACSUPPACT shall initiate the interim change message upon receipt of the review conference record.

```
Precedence:        Action:        PRIORITY
                   Info:          ROUTINE
Message handling instructions:    ADMIN

    FROM       RELEASING COMMAND//***//                          (CNO or COMNAVAIRSYSCOM or Model Manager
                                                                   Unit of PRELIMINARY Publication only)
      TO       ALL _____ AIRCRAFT/HELICOPTER ACTIVITIES//        (CAD - When available and appropriate)
                   (AND/OR)
               CNO WASHINGTON DC//N889J//
             * CMC WASHINGTON DC//***//
             * COMNAVSURFPAC SAN DIEGO CA//***//                  (When an Advisory Group Member)
               COMNAVAIRSYSCOM WASHINGTON DC//8.0H/4.1//
             * COMNAVAIRLANT NORFOLK VA//***//
             * COMNAVAIRPAC SAN DIEGO CA //***//
             * COMMARFORPAC//***//
             * COMMARFORLANT//***//
             * COMNAVSURFLANT NORFOLK VA//***//                  (When an Advisory Group Member)
             * CG FOURTH MAW//***//
             * COMNAVAIRESFOR NEW ORLEANS LA//***//
             * CNATRA CORPUS CHRISTI TX//***//
               NAVAVNDEPOT _____ __//***//                       (When Cognizant Field Activity)
               NAVAIRSYSCOM DET PMA _____ __//***//              (When DET is Program Manager)

    INFO       CINCLANTFLT NORFOLK VA//***//                      (For non-aircraft NATOPS Manuals (eg.,
                                                                   CV NATOPS Manual))
               CINCPACFLT PEARL HARBOR HI//***//                  (For non-aircraft NATOPS Manuals (eg.,
                                                                   CV NATOPS Manual))
             * COMNAVSURFPAC SAN DIEGO CA//***//                  (When not an Advisory Group Member and
                                                                   surface units are involved)
             * COMNAVSURFLANT NORFOLK VA//***//                   (When not an Advisory Group Member and
                                                                   surface units are involved)
               COMNAVSAFECEN NORFOLK VA//***//
               ANY OTHER ADVISORY GROUP MEMBER//***//             (As designated for the particular pub)
               COMNAVAIRWARCENACDIV PATUXENT RIVER MD//***//
               NAVAEROPMEDINST PENSACOLA FL//00MM//
               NAVTACSUPPACT WASHINGTON DC//60//
               DPRO _____ __//***//                              (When aircraft is still in production)
               HMX ONE QUANTICO VA//C148-11//                    (When H-3, CH-46E, CH-53 or H-60
                                                                   aircraft involved)
               MODEL MANAGER UNITS//***//                        (Include all with same type-model
                                                                   aircraft)
  UNCLAS //N03711//

  MSGID/GENADMIN/ (Originator's Unit) //
  SUBJ/INTERIM CHANGE TO _____(Aircraft/Title)_____ NATOPS PUBLICATION(S)//
  REF/A/DOC/NAVAIR/ (Date of latest change or revision) //          (NATOPS Pub identification)
  AMPN/REF A IS NAVAIR _____ { Short Title } DTD _____ CHGD _____// (NATOPS Pub identification -
                                                                     Include NAVAIR number, short
                                                                     title (eg., T-34C NFM), revision
                                                                     date, change date, etc.)
# REF/B/...../.....//                                              (Additional references as
                                                                     necessary)
# AMPN/...../.....//
# NARR/...../.....//
  POC/...../.....//
```

Figure 2-7. Sample GENADMIN Format NATOPS Interim Change Message (Sheet 1 of 2)

for identifying technical support requirements and for making decisions on policy issues, such as how new portions of the publication should be written or rewritten and, if so, who will do the writing and who is to chop the draft in advance of the main review. Preconferences are also very useful in exploring new, controversial, and/or extensive issues. They will not only prepare the participants so that they arrive at the main review with a more comprehensive understanding of the issues, but will also reduce the amount of time and work required to discuss and resolve the volume of agenda items at the main conference.

2.3.8 Conduct of NATOPS Review Conferences

a. The NATOPS program manager or a designated representative shall act as chairperson. That individual shall establish the work schedule and general organization.

b. The formal voting membership shall be limited to direct representatives of advisory group members, the model manager, and NATOPS evaluator units. Each voting command represented shall be limited to one vote. Designation of a representative from another command to vote and act for a voting member who cannot attend the review conference shall be done in writing. No individual shall have more than one vote. Votes may be cast in absentia only if made in writing. Agenda items that involve changes to policy may be introduced at the conference only if provided to all voting members in sufficient time for staffing prior to the conference. The CNO NATOPS coordinator shall make the determination of any voting procedures other than those specified herein.

c. It is often advantageous to appoint committees to consider specific agenda items or to review supplementary publications such as classified supplements and checklists.

d. Careful planning by the program manager is the key to a successful and efficiently conducted conference. Physical arrangements must provide sufficient space for joint sessions and for committee meetings as required. Appropriate reference material should be available and extra copies of the manual being reviewed should be provided. Clerical assistance shall be available, as required, to maintain a daily record of NATOPS agenda items. The requirements are provided for by aircraft manufacturers when the conference is being held at their facility.

e. Discussion should be free and relatively informal. However, the chairperson shall exercise the authority to discontinue a discussion when it is no longer profitable and call for a vote, defer the agenda item pending receipt of additional information, or refer it to a committee for further study. Agenda items may be introduced in any logical sequence. A record shall be kept of the agenda items discussed and the resulting decisions.

f. Advance change items shall be agreed upon by the conference representatives and will be issued as an interim change by CNO (N889J).

2.3.9 Conference Record

The NAVTACSUPPACT Changes Program Software shall be used to compile the conference record, unless waived by NAVTACSUPPACT. Normally, the contractor will record the results for in-production aircraft. In addition to the conference record, the program manager will provide marked-up copies of the reviewed publication(s) unless waived by the NAVTACSUPPACT representative. The record shall include:

a. A list of attendees with their command addresses and both Defense Switched Network (DSN) and commercial telephone numbers.

b. A record of the changes agreed upon, approved in writing by the CNO representative and the model manager. Handwritten change recommendation forms are not acceptable. The record shall be approved before final adjournment of the conference.

c. A list of open action items. Open action items are agenda items mutually agreed upon but which cannot be fully resolved by the conclusion of the review conference. Items that may require further approval are those affecting aircraft or auxiliary equipment operating limits, changes that would result in an appreciable increase in cost (such as the addition of new performance data or extensive art work), and changes known to be in conflict with an existing directive or publication issued by CNO, CMC, COMNAVAIRSYSCOM, or major fleet or aviation commands. If doubt exists, the CNO representative will make the determination as to the requirement for further approval.

d. A copy freeze date (deadline) for submission of all items by the model manager to the activity responsible for producing the printer's copy.

g. Critical Area/Critical Subarea — Any area or subarea that covers items of significant importance to the overall mission requirements or the marginal performance that would jeopardize safe conduct of the flight.

2.4.3 Implementation. The NATOPS evaluation program shall be carried out in every unit operating naval aircraft. Fleet readiness squadrons (FRS) shall ensure that pilots, NFOs, and air crewmembers have successfully completed a NATOPS evaluation prior to their completion of the course of instruction. In instances where it is impractical to NATOPS qualify such individuals, the formal course of replacement training shall be considered as having conditionally satisfied NATOPS requirements for a period of 1 year from the individual's completion date, provided that all required phases of instruction are completed. An entry shall be made in the individual's training jacket and log book stating that the individual is NATOPS Conditionally Qualified, utilizing a format similar to that shown in paragraph 2.4.7 of this chapter. Evaluations shall be administered to flightcrew personnel as follows:

a. Pilots (other than VP, VR, VQ, VAW, and HS), NFOs, and naval air crewmen	Within 6 months after reporting to a unit if not currently qualified in model.
b. Pilot (VP, VR, VQ, VAW, and HS)	Prior to advancing beyond third pilot or equivalent.
c. Aircrew candidates	Prior to designation as air crewmember.
d. All pilots, NFOs, and naval air crewmen holding current evaluation in model aircraft	Renewal evaluation may be accomplished within 60 days preceding expiration of a current evaluation and is valid for 12 months from the last day of the month in which the current evaluation expires. Otherwise, NATOPS qualifications shall be valid for 12 months from the last day of the month in which the evaluation is flown.

2.4.4 Procedures. The following procedures shall be followed in implementing the NATOPS evaluation program:

a. The evaluation shall consist of a ground evaluation and an evaluation flight. At the discretion of the squadron or unit commanding officer, all or part of the flight should be simulated in a weapons system trainer (WST), operational flight trainer (OFT), or other suitable training device. Use of trainers is particularly encouraged for those simulated emergencies and/or scenarios that present significantly increased risk when performed in an aircraft. If no such device is available, the aircraft cockpit may be used. Evaluation flights while deployed at sea should be avoided.

Note

Commanding officers may extend the expiration date of all NATOPS qualifications that would otherwise expire during the last 90 days of a long deployment. NATOPS qualifications that are due to expire prior to the last 90 days of a long deployment should be renewed prior to deployment. The expiration date for the extension shall not be later than 90 days after return from deployment.

b. Evaluees who receive a grade of Unqualified on a ground or flight evaluation shall be allowed 30 days in which to complete a reevaluation. At the discretion of the commanding officer, the reevaluation need only consist of those areas/subareas in which a grade of Unqualified was assigned. A maximum of 60 days may elapse between commencement of the initial ground evaluation and the date the evaluation flight is satisfactorily completed. Type commanders may waive the time limitations under circumstances making compliance impracticable.

c. Disposition of evaluees who fail the reevaluation shall be in accordance with directives by the cognizant advisory group member.

d. An annual unit NATOPS evaluation shall be conducted by the appropriate NATOPS evaluator. It shall include one or more individual NATOPS evaluations for each crew position and be administered to flight crewmembers selected at random by the evaluator to measure overall adherence to NATOPS procedures. The evaluation may be conducted as a part of such inspections as ADMAT or ORE if so scheduled by the NATOPS coordinator. Normally, the unit commander alone shall be informed in writing of the results of the evaluations and the effectiveness of the NATOPS program within the command. In instances where an unsatisfactory level of unit adherence to NATOPS is uncovered, an appropriate description of the

CHAPTER 3

Policy Guidance

3.1 POLICY CONCERNING USE OF AIRCRAFT

3.1.1 Special Policies

3.1.1.1 Emergency and Humanitarian Operations. Naval aircraft operations are authorized in emergencies such as forest fire prevention, search, rescue, major calamities, and for humanitarian reasons involving life-threatening circumstances. Notification of the operation shall be made to CNO or CMC, as appropriate, and the responsible local commander, but without delaying action when time is an essential factor.

3.1.1.2 Overnight Flights. Flights that will involve the absence of any aircraft from its home base overnight should not be authorized except when necessary in the direct interest of the U.S. Government or in the course of normal training of flight personnel whose employment is such that their flight training would otherwise be inadequate. Reporting custodians shall ensure that procedures are established to assure control over assigned aircraft conducting operations at remote stations.

3.1.1.3 Special Airlift Requirements. Special airlifts shall meet the following requirements:

a. The sole purpose of the flight must be to provide air transportation for the accomplishment of urgent business in the national interest that would suffer if other forms of transportation were relied upon.

b. The flight must be in the national interest and result in costs savings to the Department of the Navy.

3.1.1.4 Assignment of Aircraft to Specific Individuals. Unless otherwise authorized by the Secretary of the Navy, no naval aircraft will be assigned to a specific individual nor shall any individual require a specific aircraft or aircraft crew be made available for exclusive use. This does not preclude the display of pilot and crew names on aircraft.

3.1.1.5 Flights Requested by Civilian Contractors. A civilian contractor's request to use naval aircraft for flight(s) not directly associated with the terms of their contract shall be referred to CNO (N880) for authorization.

3.1.1.6 Aircraft Performance Record Attempts

a. Proposed aircraft performance record attempts shall be submitted to CNO (N880) for consideration. Appropriate details, including predicted performance and estimates of results, shall be submitted.

b. The Director, Air Warfare Division will take appropriate action to obtain the approval of the Assistant Secretary of Defense through the Office of Information and will obtain National Aeronautics Association sanction for the proposed record attempt(s).

3.1.1.7 Celebrations. Rules for participation of naval aircraft in celebrations are currently contained in SECNAVINST 5720.44, Department of the Navy Public Affairs Regulations.

3.1.1.8 Shipment Orders. Shipment orders specifying transfer by air or aircraft do not imply orders or authority for the indicated flight.

3.1.1.9 Travel Orders. This instruction does not grant authority to issue orders to personnel for travel where expenses for the personnel are involved. Such authority originates from instructions issued by the Bureau of Naval Personnel (BUPERS) or U.S. Marine Corps, as applicable.

3.1.1.10 Embarkation of Passengers

a. No person shall be enplaned as a passenger nor shall any cargo be embarked on a naval aircraft unless authorization has been granted by competent authority in accordance with applicable directives. (See OPNAVINST 4630.25, paragraph 3.2 of this instruction, and NAVSUP Publication 505.) No

3.1.3.2 Other Military Personnel

a. Naval aviators under the cognizance of COMNAVAIRESFOR or CG FOURTH MAW whose status as naval aviators has been confirmed by BUPERS or Headquarters, U.S. Marine Corps

b. Coast Guard aviators and aviation pilots of the Coast Guard Reserve whose status has been confirmed by the Commandant, U.S. Coast Guard

c. Naval, Marine Corps, and Coast Guard Reserve students undergoing authorized courses of instruction in flight training

d. Officers of the Naval and Marine Corps Reserve not designated as naval aviators, but specifically authorized to pilot aircraft by BUPERS or the Commandant, U.S. Marine Corps.

3.1.3.3 Civilian Aircraft Pilots. Civilian aircraft pilots are those employed in a flight status by agencies or departments of or contractors to the U.S. Government when such flights are in the interest of the U.S. Government and the pilots have been cleared by CNO. Authority is delegated to the Commander, Naval Air Systems Command, to approve flights in COMNAVAIRSYSCOM aircraft or in contractor custody. Contractor pilots are not permitted to fly aircraft aboard U.S. naval vessels or to perform public demonstrations in Navy aircraft without specific CNO approval. Contractor flight operations and pilot qualifications are governed by NAVAIRINST 3710.1. Flights in naval aircraft other than those in the custody of COMNAVAIRSYSCOM shall be approved by CNO.

3.1.3.4 Foreign Military Personnel. Subject to security provisions in existing directives, physically and professionally qualified personnel of foreign nations may be authorized to pilot naval aircraft as follows:

a. The reporting custodian may authorize exchange personnel or personnel attending naval aviation training programs to pilot naval aircraft. Pilot time is not to exceed 110 hours per year except when attached to an operating squadron or as necessary in connection with a course of instruction.

b. Except as indicated in the preceding paragraph, foreign pilots must be accompanied by a U.S. pilot in command. The latter shall exercise all responsibility of command set forth in this instruction. Requests for such operations shall be submitted to CNO (N889J) for approval.

c. All personnel shall meet the minimum NATOPS qualification for the model aircraft involved.

3.1.4 Personnel Authorized To Taxi Naval Aircraft

3.1.4.1 Fixed Wing. No one shall be permitted to taxi an aircraft except persons authorized to fly the aircraft or those specifically designated by their commanding officer as "taxi pilots" after appropriate training or checkout.

3.1.4.2 Helicopter. No one shall be permitted to taxi a helicopter except those persons who are authorized to fly helicopters.

3.1.5 Personnel Authorized To Perform Crew Duties in Naval Aircraft

Note

Requests for authorization required by the following subparagraphs shall be forwarded sufficiently in advance to allow for staffing through the chain of command prior to the proposed flight.

3.1.5.1 Military Personnel. Regular and Reserve military personnel under orders by competent authority to active duty or active duty for training who are qualified in accordance with current directives are authorized as flight personnel or flight personnel under training.

3.1.5.2 Civilian Personnel. DOD civilian employees and contractors to DOD may be authorized embarkation for the purpose of performing a crew duty such as operating installed equipment or observing aircraft or crew performance when required in connection with assigned duties or contractual responsibilities. Point-to-point transportation is not authorized under this paragraph except as a result of operational necessity. Authority to approve flights for civilian personnel is delegated to the Commandant of the Marine Corps; fleet commanders in chief; Commander in Chief, U.S. Naval Forces, Europe; the Chief of Naval Education and Training (CNET); Commander, Naval Air Systems Command; and the Commander, Naval Reserve Force for aircraft under their respective control. This authority may be delegated (for USN only) to numbered fleet commanders and type commanders with operational/administrative control.

Note

Civilian personnel authorized in accordance with this paragraph shall comply with the aeromedical and survival training

c. Orientation and indoctrination flights involving third-nation nationals into or over foreign countries will not be approved unless confirmation of entry clearance for such third-nation nationals has been received from the foreign government(s) concerned in accordance with the USAF Foreign Clearance Guide.

d. Except for flights for FAA personnel, orientation and indoctrination flights shall be performed only during daylight and with weather minimums equal to or better than VFR.

e. Formation flying shall not be performed unless required for a specific purpose and authorized by the controlling custodian of the aircraft to be used.

f. Flights in high-performance jet aircraft shall not be approved except when the specific aircraft utilized is integral to the orientation and indoctrination flight purpose.

g. Orientation and indoctrination flights operating from an aircraft carrier are not encouraged because of the extra hazards inherent in carrier operations. Such flights may be authorized if such experience is either necessary as part of a reporting or filming effort required for RDT&E, MAP, or FMS purposes or warranted within provisions of paragraph 3.2.1g of this section. COD flights, used only as a means to embark or debark personnel at sea, are exempt from the provisions of this paragraph.

h. An aircraft accepted for the Navy by representatives of the Naval Air Systems Command shall not be used for orientation and indoctrination flights by contractor flightcrews unless it is in an "on-loan" or "bailment" status as defined in OPNAVINST 5442.2.

i. Flights shall be conducted at no additional cost to the Government on a noninterference basis with operations and training unless a waiver is granted by the approving authority.

3.2.3 Flight Requirements. The following requirements shall apply to all orientation and indoctrination flights:

a. All personnel participating in orientation flights shall receive an appropriate physical examination and complete project-specialist or selected-passenger water survival and physiology training. Coordinated training of midshipmen (CORTRAMID) students participating in overwater orientation flights shall receive modified selected-passenger water survival training per Appendix E. Compliance with applicable provisions of paragraph 8.4 is mandatory for all persons unless waived specifically by: Commandant of the Marine Corps (Code ASM); fleet commanders in chief; Commander in Chief, U.S. Naval Forces, Europe; Commander, Naval Air Systems Command; the Chief of Naval Education and Training; and Commander, Naval Reserve Force. Waivers for ejection seat and personal oxygen system aircraft will, in general, not be granted. CNO (N88) will be an information addressee on all waiver requests and approvals (except USMC).

b. Briefing passengers:

(1) Passengers shall be briefed on any information that may be pertinent for passenger safety and comfort. Each item should be fully explained to avoid passenger apprehension or confusion.

(2) Passengers occupying flight personnel positions shall be briefed on procedures, controls, and instrumentation.

c. Non-DOD personnel are required to sign an "Air Transportation Agreement," DD 1381, as set forth in Chapter 2 of enclosure (1) to OPNAVINST 4630.25 when the flight originates in a foreign country. NATO member nation personnel traveling in the performance of official duties are exempt from this requirement.

3.2.4 Approval Authority. Subject to the limitations in subparagraphs a and b for approval of certain types of orientation and indoctrination flights, the Commandant of the Marine Corps; fleet commanders in chief; Commander in Chief, U.S. Naval Forces, Europe; Commander, Naval Air Systems Command; the Chief of Naval Education and Training; and Commander, Naval Reserve Force are authorized to approve orientation and indoctrination flights in aircraft under their respective operational control, and to act on requests for exceptions to the basic guidelines as set forth in the foregoing subparagraphs of this section. Delegation of approval authority (for USN only) to numbered fleet commanders or type commanders is authorized. To expedite action and simplify procedures for approving certain routine flights, further delegations of approval authority are contained in subparagraphs c through i. Flight approval authority includes waiver authority for Naval Aviation Physiology Training Program (NAPTP) and Naval Aviation Water Survival Training Program (NAWSTP) requirements. Waiver authority shall be applicable only for orientation and indoctrination flights. Letters or messages authorizing flight approval and NAPTP/NAWSTP waivers shall

appropriate event is conducted weighing the risks against the benefits of any airborne demonstration (to include demonstration parachute jumps). Approval authorities are required to ensure that applicable FAA International Civil Aviation Organization (ICAO) waiver or approval is obtained. SECNAVINST 5720.44 further discusses participation of naval aircraft at public and private gatherings.

3.3.2 Approval Authority. The Commandant of the Marine Corps; fleet commanders in chief; Commander in Chief, U.S. Naval Forces, Europe; the Chief of Naval Education and Training; and the Commander, Naval Reserve Force may authorize flight demonstrations sponsored by respective subordinate commands and activities. Their authority may be delegated to numbered fleet, type, and Echelon 3 commanders.

3.3.3 Regulations. The following regulations apply to participation in flight demonstrations and static displays:

a. Flight personnel assigned to participate in flight demonstrations should be those with the maximum training and experience. No pilot shall be permitted to participate who has not currently demonstrated to the commanding officer's satisfaction complete familiarity with the flight characteristics by performing with precision and safety all maneuvers to be demonstrated.

b. No extra hazardous or unusual maneuvers shall be planned or permitted at the demonstration. Routine maneuvers shall not be conducted in a manner that could make them hazardous (i.e., at excessively low altitudes or with undue close interval between aircraft). Care shall be exercised in planning and conducting the demonstration to provide maximum safety to personnel and property in event of mishap. Any ordnance delivery or expenditure in connection with a demonstration ashore for nonmilitary personnel shall receive prior specific approval from the type commander concerned.

c. When deciding whether to allow public access to naval equipment, any probability of risk must be considered. Any doubt shall be resolved by limiting or denying public access and strictly enforcing the decision once it has been made.

d. Personnel assigned to aircraft static displays shall be selected for their maturity, appearance, personality, demonstrated soundness of judgment, and knowledge of equipment. Commanding officers shall ensure that the pilot in command is particularly sensitive to any hazards that the aircraft might present to an uninformed spectator.

e. The aircrew of an aircraft used for static display shall be in attendance at the aircraft and dressed in appropriate flight clothing at all times the public has access to the aircraft. They shall not only provide information but also separate the aircraft and public from each other.

f. The public shall be denied access to the interior of all aircraft employing ejection seats or other installed pyrotechnic devices that could cause injury.

g. Ancillary equipment (workstands, etc.) must be in good condition and suitable for the purpose for which use is intended. If in the case of workstands or platforms, sufficient aircrew or other competent supervisory personnel are not available to control spectator loading to safe limits, then access shall not be permitted.

h. Aircraft selected for static display shall be clean, well painted, and prepared for public inspection.

i. Coordination shall be achieved with air traffic control authorities exercising jurisdiction over the affected airspace.

3.3.4 Exception. The U.S. Navy Flight Demonstration Squadron, which is specially trained for such flight exhibitions, is not bound by paragraph 3.3, but will be employed in accordance with the instructions of CNATRA and the on-scene commander in each instance.

3.3.5 NATO Flight Demonstrations. Flight demonstrations (including parachutists) involving aircraft of more than one NATO nation shall be conducted in accordance with NATO Standardization Agreement (STANAG) 3533, Safety Rules for Flying Displays.

3.3.6 NATO Live Weapons Demonstrations. For NATO standardization and safety purposes, the rules and procedures for the planning and conduct of live air weapons demonstrations as specified in NATO STANAG 3564FS, Rules for Live Weapons Demonstrations, shall be adhered to when the nation is either the operator of the weapon system or is responsible for the range on which the demonstration is being held.

3.4 EMPLOYMENT OF NAVAL AVIATORS BY CIVILIAN CONTRACTORS

Civilian contractors to the Federal Government cannot legally employ a naval officer on the active list

responsible for the safe and orderly conduct of the formation.

3.5.3 Mission Commander. The mission commander shall be a properly-qualified naval aviator or NFO designated by appropriate authority. The mission commander may exercise command over single naval aircraft or formations of naval aircraft. The mission commander shall be responsible for all phases of the assigned mission except those aspects of safety of flight that are related to the physical control of the aircraft and fall within the prerogatives of the pilot in command. Mission commander qualifications shall be outlined in appropriate NATOPS manuals. The mission commander shall direct a coordinated plan of action and be responsible for effectiveness of the mission.

3.5.4 Instructors. In those aviation commands where training is conducted, the commanding officer is authorized to designate highly qualified naval aviators and NFOs as instructors. Instructor duties shall be specifically delineated by the unit commanding officer (CO) in formal directives. The instructor will be charged with authority and responsibility to provide appropriate direction to students (naval aviation or NFO) to ensure safe and successful completion of each training mission. The exact function, authority, and responsibility of the individual flight instructor are dependent upon the training mission and the crew assigned as issued in approved training syllabuses. On those training missions where a pilot under instruction is the pilot in command, instructor guidance shall be advisory in nature and under no circumstance shall pilots in command be relieved of their authority and responsibility as outlined in paragraph 3.5.1. Termination of the training or evaluation portions of the flight for reasons of safety, unsatisfactory performance, or material discrepancy shall be the instructor's prerogative.

3.6 AIRCREW COORDINATION

Aircrew coordination involves the use and integration of all available skills and resources to achieve and maintain flight and crew efficiency, situational awareness, and mission effectiveness. Aircrew coordination affects pilot-to-controller and lead-to-wingman communications as well as intercockpit coordination. Commanders shall ensure that aircrew coordination training (ACT) for each aircraft crewmember is conducted annually. Such training will be recorded in the individual's NATOPS Training Jacket.

3.6.1 Key Components. The key components of aircrew coordination are as follows:

a. Chain of Command/Leadership — The ultimate responsibility for safety of flight rests with the aircraft commander/pilot in command. Every crewmember, however, has responsibility toward safety of flight, compliance with NATOPS and standard operating procedures (SOPs), and mission accomplishment. Within the chain of command, each crewmember must exercise vigilance and support the aircraft commander with timely recommendations and backup as directed.

b. Communication

(1) Effective aircrew communication skills ensure timely transfer and assimilation of accurate information. Open, professional communication that avoids defensiveness and encourages accurate understanding of the intended message is critical to information flow in the cockpit. Aviators should be aware of the basic sociological, psychological, and environmental barriers to communication.

c. Proficiency — Practiced task sharing and practiced reaction to routine and emergency situations are the cornerstones of proficiency.

d. Situational Awareness — Keeping all crewmembers motivated, interested, and updated of mission progress is the key to maintaining awareness. Rotation of tasks and good communication also stimulate awareness.

3.6.2 Loss of Aircrew Coordination. The loss of aircrew coordination often results in one or more of the following manifestations:

a. Fixation on one task to the detriment of others

b. Confusion

c. Violation of NATOPS/flight minimums

d. Violation of SOP

e. No one in charge

f. No lookout doctrine

that cannot be resolved administratively at the command level).

3.8.1 Reports of Investigations of Violations of Flying Regulations

3.8.1.1 Responsibility. An alleged violation of flying regulations falls within the purview of U.S. Navy regulations. The responsibility to conduct the investigation into an alleged flight violation belongs to the immediate superior in the chain of command of the individual involved. However, activities whose base facilities and/or aircraft are used by pilots not attached to those activities are responsible for conducting the investigation and for notifying the commanding officer of the individual involved.

3.8.1.2 Procedures. Investigation and reporting procedures shall be in JAGMAN format using the guidelines and rules contained in JAGINST 5800.7, Manual of the Judge Advocate General. Each fact must be supported by testimony, documentary, or real evidence. Statements of the pilots concerned should be included along with maintenance action forms, flight schedules, and other documentary evidence. The report of violation of flying regulations is administrative in nature, and statements taken thereunder may not be the basis of subsequent legal or disciplinary proceedings unless the provisions of Uniform Code of Military Justice (UCMJ) Article 31 have been observed.

3.8.1.3 Intent. Lack of intent does not in itself constitute absence of culpability. One can be so "grossly negligent as to equate omission with commission." The question is whether the pilot in command or the formation leader could reasonably have been expected to avoid the violation.

3.8.1.4 Content of Report. In making a report of an alleged violation of flying regulations, the commanding officer shall state a conclusion as to whether the alleged violation actually occurred, and if so:

a. A conclusion as to whether or not the pilot in command was culpable in the light of pilot responsibilities and any mitigating or extenuating circumstances that may have existed.

b. Any action taken, pending, or recommended.

Note

The authority to issue a flight violation lies solely with the Chief of Naval Operations.

3.8.1.5 Forwarding of Report. With the exception of alleged air defense identification zone (ADIZ) violations, reports regarding naval personnel shall be forwarded to CNO (N885F) via the chain of command. Alleged flight violations involving USMC personnel shall be forwarded through CMC (ASM) prior to final processing by CNO (N885F). Each endorser shall indicate concurrence/nonconcurrence with the commanding officer's report. Under no circumstances shall a report of investigation be released to any agency outside the Navy without prior approval of CNO (N88). Direct communication with commands (activities/agencies) outside the naval service in connection with violations shall be limited to that authorized in the basic instruction.

3.8.1.6 Time Limits on Action of Each Report of Investigation

a. To expedite action on a report of an investigation of an alleged violation, investigation by military agencies are limited as follows:

(1) By the investigating unit — Within 14 duty days from time of receipt.

(2) By each intermediate command — Within 7 duty days from time of receipt.

b. Each report will reach the appropriate final addressee within 60 days except in the following cases:

(1) When a commander cannot complete an investigation within the above time schedule, the commander will notify the final addressee of the reason for the delay and give an estimate of when the investigation will be forwarded.

(2) When Field Naval Aviator Evaluation Board (FNAEB) or Field Flight Performance Board (FFPB) proceedings are involved, the commander will be governed by current regulations (NAVMILPERSMAN ART. 3410300) or Marine Corps Order 1000.6D (ACTS) Manual as appropriate. Inform CNO (N885). An FNAEB or FFPB does not relieve the command of the requirement to conduct a JAGMAN investigation.

(3) When a commander takes UCMJ action as a result of a flying violation, the commander will promptly forward the report of investigation and inform the final addressee of any pending action. An officer who exercises general court-martial

CHAPTER 4

Flight Authorization, Planning, and Approval

4.1 FLIGHT AUTHORIZATION

4.1.1 Authority. Naval aircraft shall not be flown by any person unless authorized by the reporting custodian or other commander exercising operational control over the aircraft concerned. All flights shall be in the national interest with fleet readiness receiving the highest priority. Efficient utilization of aircraft and available funds is the responsibility of the reporting custodian.

4.1.2 Documentation. Authorization for a flight shall be documented by a published flight schedule or other similar directive signed by commanding officers or their delegated authority. As a minimum, the document shall contain the following elements.

a. Names and flight function of all flight personnel

b. Designation of the pilot in command, mission commander, and/or formation leader as appropriate

c. Chain of command for formation flights in the event of an abort by the designated flight leader

d. Aircraft model assigned

e. Total mission or requirement code

f. Point of departure, destination, and en route stopover points

g. Date and estimated time of departure (ETD)

h. Estimated time en route (ETE) or estimated time of arrival (ETA).

Note

For missions such as strip alert, SAR alert, etc., the words "as directed" or "to be assigned (TBA)" may be entered for ETD and ETE/ETA.

4.1.3 Flightcrew Requirements. Prior to authorizing flight in naval aircraft, commanders shall ensure that the person designated as pilot in command is in all respects qualified for flight in model and that minimum flightcrew requirements are met.

4.2 MINIMUM FLIGHTCREW REQUIREMENTS

The minimum flightcrew requirements for naval aircraft are set forth in the applicable NATOPS manual for individual aircraft models. The Chief of Naval Air Training may modify such requirements and the requirements set forth below as necessary for training purposes.

4.2.1 Aircraft Commander Requirement. An aircraft commander (paragraph 12.2.2.3) shall be designated for the following multipiloted aircraft missions:

a. Operational/tactical missions

b. Administrative missions in helicopters

c. Training flights, except those that are within the capabilities of pilots of lower classification and which, in the opinion of the commanding officer, are best suited to teach such pilots self-reliance and command responsibility

d. Flights in which the transport of passengers is involved

4.2.2. Insufficient NATOPS Guidance. Where individual NATOPS manual guidance is lacking, the minimum flightcrew requirements for multipiloted aircraft are as follows:

a. A pilot in command possessing a valid instrument rating designated in accordance with paragraph 3.5.

a. A military requirement exists for such landing.

b. Adequate safeguards are taken to permit safe landing and takeoff operations without hazard to people or property.

c. There are no legal objections to landing at such nonairfield sites.

Note

Commanding officers are authorized to waive the provisions in items a through c when dispatched helicopter or VSTOL aircraft is engaged in SAR operations.

4.4.3 Fuel Purchase. Aircraft fuel and oil are made available to military users through military, Government contract, and commercial sources. There is no economical justification for pilots to purchase fuel/oil from commercial sources. The cost of such fuel is considerably higher than that purchased from either military or contract sources. Navy and Marine Corps flight personnel are not authorized to purchase aircraft fuel/oil from other than military or contract sources except under the following circumstances:

a. Flight is classified as official business.

b. Flight is terminated as a result of a bona fide emergency.

c. Flight terminates at alternate airport in lieu of filed destination.

d. Flight is made by aircraft with limited range and purchase of aircraft fuel or oil from other than military or contract (Government) sources is necessary to complete the assigned mission.

4.4.4 Flight Plans

4.4.4.1 General. A flight plan appropriate for the intended operation shall be submitted to the local air traffic control facility for all flights of naval aircraft except the following:

a. Flights of operational necessity.

b. Student training flights under the cognizance of CNATRA conducted within authorized training areas. CNATRA shall institute measures to provide adequate flight following service.

4.4.4.2 Forwarding Flight Plans to Air Route Traffic Control Center (ARTCC)/Flight Service Station (FSS). Delivery of a properly prepared flight plan form to duty personnel at an established base operations office at the point of departure assures that the appropriate ARTCC/FSS will be furnished with:

a. Essential elements of the flight plan as initially approved

b. A takeoff report.

4.4.4.3 No Communication Link. If no communication link exists between the point of departure and the ARTCC/FSS, the pilot may relay the flight plan to an appropriate FSS by commercial telephone. When unable to file in person or by telephone, the flight plan may be filed as soon as possible by radio after takeoff. Flight in controlled airspace in IMC without ATC clearance is prohibited. Filing by radio after takeoff is not permitted when it will involve unauthorized IMC flight. In any case, the pilot's responsibility is not fulfilled until a completed flight plan and passenger manifest have been deposited with the airport manager or other suitable person.

4.4.4.4 Direct User Access Terminal Service (DUAT). DUAT is not intended to provide flight-plan service to the military and, therefore, is not designed to format the flight notification messages mandated for the military user or for any aircraft filing to a military destination. DUAT shall not be used to file a flight plan to a military destination.

4.4.4.5 Flight Plan Forms. The forms listed below are used to submit flight plans in the circumstances indicated:

a. The DD 175, military flight plan, completed in accordance with FLIP General Planning, is used for other than local flights originating from airfields in the United States at which a military operations department is located (see FAR 91.153 and 91.169 for mandatory items). A daily schedule containing an approved stereo (ARTCC computer stored)/canned flight plan code may be used in lieu of a DD-175 for other than local flights provided the point of departure is a military facility and the stereo/canned flight plan conforms to agreements with the parent ARTCC.

b. A daily schedule or abbreviated single-copy DD-175 may be authorized by the approval authority for use when the flight will be conducted

utilized for each leg. Pilots shall periodically determine that the intended route of flight remains clear of aviation severe weather watch (WW) bulletins and that weather forecasts for each successive intermediate destination (and alternates when required) continue to satisfy the minimums es- tablished in paragraph 4.6.3 or 5.2 as applicable.

c. No change shall be made in the pilot in command.

d. A corrected manifest shall be left with a responsible person at each intermediate base at which a change of passengers or crew occurs (see paragraph 4.6.1).

e. Weight and balance must remain within limits (see paragraph 4.6.5).

f. A revised flight plan *void* time shall be filed with Flight Service when appropriate.

g. The pilot shall close out the balance of the original flight plan if the flight is terminated at an intermediate base.

Note

Stopover flights outside of the United States are governed by the procedures contained in the appropriate area FLIP (planning) publication.

4.4.5 Signing the Flight Plan

4.4.5.1 Pilot in Command/Formation Leader. Except when a daily flight schedule is used in lieu of a flight plan form, the pilots in command/formation leaders shall sign the flight plan for their flight. A signature by the pilot in command/formation leader on the flight plan certifies the following:

a. The flight has been properly authorized.

b. Adequate flight planning data, including NOTAM service, was available for complete and accurate planning.

c. The flight will be conducted in accordance with governing directives and adherence to criteria for fuel requirements and weather minimums.

d. Call sign selection for cross-country flights shall be made in accordance with DOD FLIPs. It is strongly recommended that squadron modex (NJ213, DB214) be used in flight planning. If the use of tactical/squadron call signs is necessary, call signs shall be the approved JANAP 119 call sign for the unit concerned. Abbreviations or contractions of these call signs is not authorized.

e. Each pilot in a formation flight has received the required weather briefing.

f. The pilot in command/each pilot in a formation flight possesses a valid instrument rating if any portion of the flight is to be conducted under IMC or in positive control areas or positive control route segments.

g. Passengers have been properly briefed and manifested.

h. Proper weight and balance forms, if applicable, have been filed.

i. The pilot in command acknowledges responsibility for the safe and orderly conduct of the flight.

4.4.5.2 Daily Flight Schedule. A signature by the reporting custodian or other appropriate authority on the daily flight schedule, when used in lieu of a flight plan form, signifies that preceding items (a) through (h) shall be assured prior to flight.

4.4.5.3 Flight Plan Approval. The pilots in command of a naval aircraft or formation leaders are authorized to approve the flight plan for their proposed flight or modification thereof.

4.5 FLIGHT PLAN MODIFICATION

Modification of a written flight plan shall be accomplished only with the concurrence of the pilot in command.

4.6 OTHER PREFLIGHT REQUIREMENTS

4.6.1 Manifest Requirements. The pilot in command of a naval aircraft flight shall ensure that a copy of the manifest is on file with a responsible agency at the point of departure prior to takeoff. The manifest shall include an accurate list of personnel aboard the aircraft, showing names, serial numbers, grade and service if military, duty station, and status aboard the aircraft (passenger or crew). All persons aboard other than flight personnel are "passengers" and shall be manifested as such. When initial transmission of a flight plan by radio is permitted after takeoff in accordance with this instruction, depositing such a personnel list continues to be a mandatory pretakeoff requirement of the pilot in command of the flight. The pilot shall state the location of the required personnel

<table>
<tr><th>DESTINATION WEATHER
ETA plus and minus 1 hour</th><th colspan="3">ALTERNATE WEATHER
ETA plus and minus 1 hour</th></tr>
<tr><td>O — O up to but not including published minimums</td><td colspan="3">3,000 — 3 or better</td></tr>
<tr><td rowspan="3">Published minimums up to but not including 3,000 — 3 (single-piloted absolute minimums 200 — 1/2)</td><td rowspan="2">NON-PRECISION</td><td colspan="2">PRECISION</td></tr>
<tr><td>ILS</td><td>PAR</td></tr>
<tr><td>*Published minimum plus 300-1</td><td>*Published minimums plus 200-1/2</td><td>*Published minimums plus 200-1/2</td></tr>
<tr><td>3,000 — 3 or better</td><td colspan="3">No alternate required</td></tr>
<tr><td colspan="4">*In the case of single-piloted or other aircraft with only one operable UHF/VHF transceiver, radar approach minimums may be used as the basis for selection of an alternate airfield.</td></tr>
</table>

Figure 4-1. IFR Filing Criteria

4.6.3.3 Alternate Airfield. An alternate airfield is required when the weather at the destination is forecast to be less than 3,000-foot ceiling and 3-statute mile visibility during the period 1 hour before ETA until 1 hour after ETA.

Note

If an alternate airfield is required, it must have a published approach compatible with installed operable aircraft navigation equipment that can be flown without the use of two-way radio communication whenever either one of the following conditions is met:

a. The destination lacks the above described approach.

b. The forecasted weather at the alternate is below 3,000-foot ceiling and 3-statute mile visibility during the period 1 hour before ETA until 1 hour after ETA.

4.6.3.4 Icing and Thunderstorm Conditions. Flights shall be planned to circumvent areas of forecast atmospheric icing and thunderstorm conditions whenever practicable.

4.6.3.5 Aviation Severe Weather Watch Bulletins. The National Weather Service issues unscheduled WWs whenever there is a high probability of severe weather. WWs are used for a designated area and a specified time period. WWs are used by the Navy and Marine Corps weather forecasters for forecasting hazardous flying conditions. The Air Force issues scheduled military weather advisories (MWA). Those graphical advisories are an estimate of the weather-producing potential of the existing air masses. The advisories will be given to all pilots filing from U.S. Air Force bases and will be used for flight planning when a National Weather Service WW is unavailable. Valid WW and MWA bulletins will be graphically displayed in all Navy and Marine Corps weather briefing offices. Air Force advisories do not constitute a National Weather Service WW. Except for operational necessity, emergencies, and flights involving all-weather research projects or weather reconnaissance, pilots shall not file into or through areas that the National Weather Service has issued a WW unless one of the following exceptions apply:

a. Storm development has not progressed as forecast for the planned route. In such situations:

(1) VFR filing is permitted if existing and forecast weather for the planned route permits such flights.

(2) IFR flight may be permitted if aircraft radar is installed and operative, thus permitting detection and avoidance of isolated thunderstorms.

(3) IFR flight is permissible in positive control areas if VMC can be maintained, thus enabling aircraft to detect and avoid isolated thunderstorms.

4.7.2 Nonmilitary Installations. At nonmilitary installations, the pilot shall close the flight plan with flight service through any means of communication available. Collect, long-distance telephone service may be used if required. When appropriate communication links are known or suspected not to exist at the point of intended landing, a predicted landing time in lieu of the actual landing shall be reported to an appropriate aeronautical facility while airborne.

Note

Cancellation of an instrument flight plan does not meet the requirement for "closing out" the flight plan. When a landing report has been properly delivered, the flight plan will be considered closed out.

CHAPTER 5

Flight Rules

5.1 GENERAL FLIGHT RULES

5.1.1 Aircraft Lighting. Except when the nature of operations requires different lighting displays (i.e., formation flight, aerial refueling, carrier operations, night vision device (NVD) operations, FCLP pattern, emergency signals, etc.) or the model aircraft configuration precludes compliance, the following rules shall apply.

Note

Flight operations with NVDs are specifically addressed in paragraph 5.7.

5.1.1.1 Position Lights. Standard position lights shall be displayed during the period 30 minutes before official sunset until 30 minutes after official sunrise or at any time when the prevailing visibility as seen from the cockpit is less than 3 statute miles. During these conditions, they shall be displayed:

a. Immediately before engine start and anytime the engine(s) is running.

b. When the aircraft is being towed unless the aircraft is otherwise illuminated.

c. When an aircraft is parked and likely to cause a hazard unless the aircraft is otherwise illuminated or marked with obstruction lights.

5.1.1.2 Anticollision Lights. Anticollision lights shall be used immediately before engine start and at all times when the aircraft engine(s) is in operation, except when the use of such lights adversely affects ground operations (i.e., arming and dearming, refueling operations, etc.). They may be turned off during flight through clouds when the rotating light reflects into the cockpit. The use of green anticollision lights for the specific purpose of identifying airborne tankers is authorized, provided that standard position lights are also displayed.

5.1.1.3 Landing/Taxi Lights. The use of landing/taxi lights is an effective means of illuminating surface hazards during taxi movements at night and alerting all concerned of an aircraft's presence/position in flight. Landing/taxi lights should be utilized for all taxi movements ashore during the hours of darkness unless the aircraft is being directed by a taxi signalman. Use of those lights during landing approaches (both day and night) within class B, C, or D airspace is recommended when meteorological conditions permit.

Note

- Good judgment should be exercised to avoid blinding pilots of other aircraft that are either airborne or on the ground.
- Use of landing/taxi lights is recommended in areas of high bird concentration.

5.1.1.4 Formation Flight Lighting. To the extent necessary for safety, lighting configuration for formation flights may be varied according to aircraft model and mission requirements. Normally, all aircraft in the flight shall have external lights on and at least one aircraft in the flight shall have lights on bright and the anticollision light on when aircraft lighting is required.

Note

Aircraft engaged in drug interdiction operations are granted relief from FAR 91.209(a) provided each operation is conducted using a dedicated onboard observer, electronic/radar equipment, or an observer in a spotter aircraft, all of which must be capable of detecting the presence of other aircraft operating in proximity to the interdiction aircraft and alerting the pilot to those aircraft locations. Additionally, interdiction aircraft will be required to operate the aircraft position lights to the maximum extent possible when instructed by ATC and will be authorized to operate without lights only when necessary to avoid detection by illegal elements.

Commander, Naval Reserve Force; Commanding General, Fourth Marine Air Wing; or Commander, Naval Air Systems Command, as appropriate. Such operations may be approved providing full consideration is given to mission requirements and the safety of nonparticipating aircraft. The above commanders must review and approve each route established in accordance with paragraphs 5.1.4.2c and 5.1.4.2d within respective areas of responsibility. Coordination will be effected with the appropriate NAVREP at the FAA Regional Office to ensure that notice to the aviation public is provided.

Note

When an altitude below 10,000 feet MSL is assigned to aircraft requiring a higher operating speed for safe maneuverability, as indicated in the NATOPS manual for that aircraft, the pilot shall notify the controlling ATC facility of that higher minimum speed.

5.1.5 Supersonic Flight Operations

5.1.5.1 General. Commanding officers assigned aircraft capable of supersonic flight shall ensure that aircrews are thoroughly familiar with the shock wave phenomenon peculiar to supersonic flight. Serious damage, annoyance, and mental stress have resulted from sonic booms. It is incumbent on every pilot flying aircraft capable of generating sonic booms to reduce such disturbances and damage to the absolute minimum dictated by operational/training requirements.

5.1.5.2 Policy. Supersonic flight operations shall be strictly controlled and supervised by operational commanders. Supersonic flight over land or within 30 miles offshore shall be conducted in specifically designated areas. Such areas must be chosen to ensure minimum possibility of disturbance. As a general policy, sonic booms shall not be intentionally generated below 30,000 feet of altitude unless over water and more than 30 miles from inhabited land areas or islands. Deviations from the foregoing general policy may be authorized only under one of the following:

a. Tactical missions that require supersonic speeds

b. Phases of formal training syllabus flights requiring supersonic speeds

c. Research, test, and operational suitability test flights requiring supersonic speeds

d. When specifically authorized by CNO for flight demonstration purposes.

5.1.5.3 Reports, Inquiries, and Investigations

a. The Department of the Navy must accept responsibility for restitution and payment of just claims for damage resulting from sonic booms determined to have been caused by naval aircraft. To assist in determining validity of claims, all supersonic flights conducted over the continental United States or within 50 miles offshore shall be logged as to time, date, location, speed, and altitude of occurrence and retained at the unit level for 24 months.

b. Section 0910f of the Manual of the Judge Advocate General (JAGINST 5800.7) provides information and instructions concerning investigations into sonic boom complaints and alleged damage claims.

c. A computerized central sonic boom repository is maintained at Headquarters, U.S. Air Force containing records of USAF supersonic flight activity reported as having occurred over the continental United States and within 50 miles offshore. A readout from the central repository for use in investigating claims/complaints can be obtained by contacting CNO (N885F).

5.1.6 Aerobatic Flight

5.1.6.1 General. CNO does not desire to discourage or curtail aerobatic training; however, it is of the utmost importance that aerobatic training be well regulated as to time, place, and conditions that enhance safety of flight.

5.1.6.2 Aerobatic Flight Precautions. Aerobatic flight maneuvers, as defined in paragraph 1.3.3, shall not be performed:

a. If prohibited by the NATOPS manual or other directives applicable to a particular model aircraft.

b. Within a control zone of Federal airway.

c. Over congested areas or open air assemblies of persons.

d. Unless the aircraft remains in VFR conditions and at an altitude of at least 1,500 feet above the highest obstruction to flight or cloud tops within horizontal distance of 5 statute miles. Exception: diving and recovering maneuvers as necessitated by gunnery and dive bombing or other tactical airspace where FARs apply (i.e., restricted areas and international airspace).

g. Departure/spin recovery procedures shall be covered for all ACM participants during the preflight brief.

h. A face-to-face brief shall be conducted by ACM participants unless waived in accordance with applicable directives. As a minimum, one individual from each participating unit shall attend a face-to-face brief. In the event participating units are not collocated, a memorandum of understanding, a message or telephone brief, or a preexercise brief between units may satisfy this requirement.

5.1.7.2 ACM Training

a. The nature of ACM demands that pilots be thoroughly familiar with the performance capabilities and limitations of the aircraft being flown. Rapid changes in heading, altitude, and the wide range of velocities generated greatly increase the possibility of collisions between aircraft. ACM must be closely supervised and training rules (TR) (formerly rules of engagement) applied that will provide a high degree of safety for all concerned.

b. Such training shall be conducted in airspace as nearly free from other aircraft as practicable. It shall be conducted only in designated warning/restricted areas, in controlled airspace as assigned by ATC, or in other designated areas where safe separation from nonparticipants can be maintained. As a minimum, designated ACM areas shall be clear of Federal airways, control zones, and other areas of traffic congestion unless established under a letter of agreement with the FAA or host nation. Type commanders or officers in tactical command (OTCs), when deployed, shall designate ACM training areas and establish procedures to ensure that entering flights are aware of the existence of other scheduled flights operating there.

c. The ACM training rules set forth here are minimum requirements. Supplementary directives shall be issued as required by responsible commanders delineating syllabus contents, proficiency levels required, communication procedures, safety precautions, and other applicable areas of concern.

5.1.7.3 ACM Training Rules. The following rules are intended to provide guidance for conducting safe, accident-free ACM training:

a. Always assume the other aircraft does not see you.

b. Aircraft will maneuver to maintain at least 500 feet of separation from all other aircraft during engagements, including aircraft within the same division/section.

c. During a forward quarter or head-on pass (track crossing angle greater than 135°), both aircraft will maintain the established trend. Where no established trend exists, each aircraft will give way to the right to create a left-to-left pass. When operating on the same radio frequency, aircrew should broadcast their own intentions if the direction of pass is in doubt. When operating on dual frequencies, exaggerate aircraft movements to ensure that the other aircraft recognizes your intentions.

d. The "up-sun" aircraft has responsibility for maintaining flight separation. If the up-sun aircraft loses sight, it will broadcast lost sight and maintain a predictable course. If the "down-sun" aircraft loses sight, it will break off the attack, lag the up-sun aircraft, and broadcast that it has lost sight. If the up-sun aircraft still has sight of the down-sun aircraft and safe separation can be maintained, the up-sun aircraft must immediately broadcast "continue," otherwise a knock-it-off will be initiated.

e. An aircraft pursuing another aircraft in a descent shall monitor the defensive aircraft's altitude/attitude and break off the attack with a turn away prior to either aircraft descending through the applicable altitude deck based on airspeed and angle of attack.

f. Nose-high aircraft on converging flightpaths shall deconflict with the higher nose attitude aircraft going high unless he/she is unable because of energy state or aircraft performance. The low or nose-low aircraft has the responsibility for maintaining flight separation.

g. A lead turn conducted while on converging flightpaths that causes the attacking aircraft to lose sight is prohibited.

h. With an offensive aircraft approaching gun parameters, defensive aircraft shall not dispense flares as part of a gun defense or as a distraction.

i. Fixed wing versus fixed wing TR:

(1) All fixed-wing, forward-quarter missile attacks (attempts to obtain AIM-9 tone rise or self-track from boresight, or attempts to obtain a

5.1.7.5 ACM Weather Criteria. All ACM engagements shall be conducted in daylight VMC using the following criteria:

a. ACM will not be conducted into or through an overcast or undercast.

b. The top of the undercast or broken cloud layer is the simulated ground level.

c. Fixed wing versus fixed wing:

(1) ACM shall be conducted with at least 2,000 feet vertical and 1-nm horizontal separation from clouds at all times.

(2) Five miles minimum visibility with a defined horizon.

d. Fixed wing versus helicopter:

(1) ACM shall be conducted with a minimum ceiling of 3,000 feet above ground level (AGL).

(2) Five miles minimum visibility with a defined horizon.

e. Helicopter versus helicopter:

(1) ACM shall be conducted with a minimum ceiling of 1,000 feet AGL.

(2) Three miles minimum visibility with defined horizon.

5.1.7.6 Fixed Wing Versus Fixed-Wing ACM Altitude Restrictions. To ensure standardization and provide an adequate margin of safety, the following restrictions shall apply:

a. No sustained maneuvering shall occur below a 5,000-foot hard deck above the terrain or undercast (e.g., over 4,000-foot terrain or a 4,000-foot undercast, the hard deck shall be adjusted to 9,000 feet). If the terrain or undercast is not of uniform height in the area of engagement, the deck shall be adjusted to reflect the highest terrain/undercast. Aircrew should also brief that visual altitude and attitude cues will not be accurate under these circumstances.

b. High angle of attack (AOA)/slow-speed maneuvering shall be terminated passing through 10,000 feet AGL (soft deck). If the 5,000-foot AGL hard deck has been raised because of an undercast, high AOA/slow speed shall be raised and maneuvering shall be terminated at the appropriate altitude AGL (i.e., with a 4,000-foot AGL undercast, the hard deck shall be 9,000 feet AGL and the soft deck shall be 14,000 feet AGL). Gun defense shall not be executed below the soft deck.

c. Offensive and defensive maneuvering below the 5,000-foot deck shall be conducted in accordance with the following:

(1) For aircrews not low-altitude-flight-training qualified and current in accordance with appropriate service directives, the minimum altitude shall be 500 feet AGL.

(2) For aircrews low-altitude-flight-training qualified and current in accordance with appropriate service directives, the minimum altitude shall be 200 feet AGL.

(3) Functional wing/operational/group commanders may request waivers from such minimum altitudes from COMNAVAIRLANT, COMNAVAIRPAC, COMNAVAIRESFOR, or CMC as appropriate.

(4) When an offensive/defensive relationship is established, the defensive aircraft will react with a wing rock, an extension or separation maneuver, or the continuation of a level or climbing defensive turn of not more than 180° as measured from the heading at the beginning of the turn. The engagement shall also be terminated if a role reversal occurs.

(5) When during the initial maneuvering neither aircraft can be assessed as defensive, the engagement will be terminated when any aircraft has turned a maximum of 180° as measured from the heading at the beginning of the maneuvering.

(6) If the attacking aircraft's initial conversion turn is undetected, the engagement needs not to be terminated until the defensive aircraft reacts and turns a maximum of 180°.

(7) If a low-flying, fixed-wing aircraft wishes to maneuver in excess of 180° of turn, the initial turn shall be made so as to carry him/her above the 5,000-foot deck. Once above 5,000 feet, ACM will only be continued if each aircraft meets the appropriate airspeed and AOA requirement for ACM below the soft deck. Any aircraft not meeting those requirements will terminate ACM.

will cease maneuvering for that particular engagement without "knocking off" the entire exercise. After "terminating" a localized engagement, the affected aircraft are free to pursue additional missions within the exercise in accordance with prebriefed instructions. "Knock it off" calls shall be acknowledged via UHF radio calls by all participating pilots using individual call signs.

WARNING

High midair collision potential exists following "Knock it off" calls.

5.1.8 Simulated Instrument Flight

5.1.8.1 Chase Aircraft Requirement. A chase aircraft shall be used for all simulated instrument flight in single-piloted aircraft when a vision restricting device is being used. A chase plane shall also be required for simulated instrument flight in multipiloted aircraft if adequate cockpit visual lookout cannot be maintained. Visual lookout is considered adequate:

a. For side-by-side seating configurations, when two crewmen in addition to and having positive communication with the pilot are aboard. One crewman must be in a suitable position to monitor the flight instruments and both crewmen together must be able to clear the aircraft from potential midair collision hazards.

b. For tandem seating configurations, when the vision-restricting device is being used only in the rear seat.

5.1.8.2 Chase Aircraft Position and Communication. The chase plane should fly in a position 500 feet aft and 500 feet to either side of the aircraft being chased so as to ensure clearance in all quadrants. Positive communication must be maintained at all times between the two aircraft and any controlling agency. If communication is lost, the pilot practicing simulated instruments shall immediately go contact and remain contact until positive communication is reestablished.

5.1.8.3 Altitude Limitations. Pilots of single-seat aircraft may not use a vision restricting device below 1,000 feet AGL except on a precision approach. The vision restricting device may be used down to 500 feet AGL. In single-piloted aircraft, with dual sets of flight controls and in multipiloted aircraft, a vision restricting device may be used by one pilot for simulated instrument takeoffs and down to minimums for the approach being flown, provided the other pilot is NATOPS qualified in model. Helicopters equipped with automatic hover equipment are specifically waived from simulated instrument altitude restrictions during low level ASW/SAR training, provided the pilot not on the controls is NATOPS qualified in model.

5.1.9 Formation Flying

5.1.9.1 General. Formation flying is authorized only for units and types of aircraft for which a valid requirement exists. Appropriate commanders shall ensure issuance of and adherence to specific instructions and standard operating procedures for all aspects of formation flying.

5.1.9.2 Preflight. The formation leader shall execute one flight plan for the entire formation and shall:

a. Sign the flight plan form as pilot in command.

b. Ensure that all pilots are briefed on en route weather and navigational aids.

c. Ensure that each pilot holds a valid instrument rating if any portion of flight is to be conducted under IMC.

d. Ensure that a flight leader formation brief is conducted to include but not to be limited to loss of sight, lost communication, inadvertent IMC, and emergency procedures.

e. Ensure that necessary maps, charts, and publications are in the possession of each pilot.

f. Ensure that formation integrity is maintained in flight.

5.1.9.3 Formation Takeoffs. Section takeoffs for fixed-wing aircraft of similar performance are authorized only for units and types of aircraft whose military missions require formation flying, including essential pilot training. On ground roll, safe lateral separation shall be maintained (in event of blown tire, aborted takeoff, etc.) with leading aircraft on downwind side (if crosswind exists). Differences in flying characteristics, especially stall speeds because of gross weight and/or configuration, shall be considered.

Note

Lateral separation for required minimum interval takeoff (MITO) shall be governed by local directives.

5.2.2 Judgment. Although the choice of flight rules to be followed is normally dictated by weather and mission considerations, sound judgment plays a most important role. There are occasions when VFR may be legally followed by applying the appropriate visibility and cloud clearance criteria. That prerogative should be exercised with reasonable restraint. The established weather criteria are minimums. The pilot should allow a greater margin of safety when operational requirements permit, particularly in terminal areas or when reduced visibility or cloud conditions make flight under VFR questionable. Pilots shall file and retain an IFR clearance to the maximum extent practicable consistent with mission accomplishment. (See paragraphs 5.3.1 and 6.4.)

5.2.3 See and Avoid. The see-and-avoid concept applies to visual flight conditions, thus eliminating the need for specific route clearance from ATC agencies under most circumstances. Since pilots are responsible for their own separation from other aircraft, conditions must exist that permit ample opportunity to see and avoid other air traffic and maintain obstruction clearance. The following measures shall serve as additional precautions when separation is maintained through the see-and-avoid concept, provided no degradation of the assigned mission will result.

a. Excepting single-seat aircraft, electronic equipment such as airborne radar should be used where feasible.

b. Where available, radar advisory service shall be requested especially when VFR flight is required through high-density traffic areas.

5.2.4 Weather Minimums. Within airspace where FAR, Part 91, pertains, cloud clearance and visibility minimums shown in Figure 5-1 shall prevail throughout a VFR flight. In addition, ceiling and visibility minimums within control zones must be at least 1,000 feet and 3 statute miles. If more stringent VFR minimums have been established for the point of departure or destination, as noted in the supplementary airport remarks section of the DOD FLIP AP/1, AP/2, or AP/3, then ceiling and visibility must be at or above those minimums in the applicable control zone. Existing and forecast weather must be such as to permit VFR operations for the entire duration of the flight. Destination weather shall be at least 1,000-foot ceiling and 3-statute mile visibility (or such higher minimums as noted in the supplementary airport remarks section of the DOD FLIP AP/1, AP/2, or AP/3) and forecast to remain at or above those minimums during the period 1 hour before ETA until 1 hour after ETA. Exceptions to the minimums are as follows:

a. Deviations under FAR 91.157, Special VFR Weather Minimums, are permitted except at those airports where special VFR is not authorized in fixed-wing aircraft. For special VFR within controlled airspace, the pilot must obtain authorization from air traffic control; ceiling must be a minimum of 500 feet; visibility must be a minimum of 1 statute mile; aircraft must remain clear of clouds, and the pilot and aircraft must be certified for instrument flight. Aviation commanding officers in the chain of command may authorize helicopter special VFR flights in conditions below 500 feet/1 mile for missions of operational necessity. The authority granted by this paragraph shall not be delegated.

b. Outside of controlled airspace, helicopters may be operated below 1,200 feet AGL, clear of clouds, when the visibility is less than 1 statute mile if operated at a speed that allows the pilot adequate opportunity to see and avoid other air traffic and maintain obstacle clearance.

Note

FLIP General Planning, Chapter 6 (International Rules and Procedures), outlines the general flight rules for operation of military aircraft in airspace where FAR 91 does not apply.

5.2.5 Weather Conditions Precluding VFR Flight. When weather conditions encountered en route preclude compliance with visual flight rules, the pilot in command shall take appropriate action as follows to:

a. Alter route of flight so as to continue under VFR conditions or

b. Remain in VFR conditions until a change of flight plan is filed and IFR clearance obtained or

c. Remain in VFR conditions and land at a suitable alternate.

5.2.6 Additional Requirements

a. Except when necessary for takeoff and landing or when the mission of the flight requires otherwise, flights in fixed-wing aircraft shall not be conducted below an altitude of 500 feet above the terrain or surface of the water.

b. For aircraft to operate on a VFR clearance above "broken clouds" or an "overcast," climb to and descent from such "on top" flight shall be made in

5.3.1.3 ATC Clearance Requirement. Flights shall not be made in IFR conditions within controlled airspace until an ATC clearance has been obtained.

5.3.1.4 Instrument or Combination Flight Plan. An instrument or combination (VFR/IFR) flight plan shall be filed for all flights that may reasonably expect to encounter in-flight IFR conditions during any portion of the planned route. The VFR portion of the flight shall meet VFR criteria set forth in paragraph 5.2.

5.3.1.5 Compliance With Directives. The pilot in command shall ascertain that the clearance requested is in accordance with the instrument flight requirements of FAR, other governing regulations, and flight rules set forth in this instruction.

5.3.1.6 Limitations of Aircraft/Equipment. Preflight procedures will be established and monitored to assure that communication, navigation, and identification equipments required for the flight are operative at takeoff. Preflight/in-flight malfunctions of such equipment shall be construed as adequate cause to cancel/abort missions other than those of operational necessity. The pilot shall ensure that ATC is advised of any limitations of the pilot's aircraft and equipment that will necessitate special handling.

5.3.1.7 Minimum Altitude

a. When out of controlled airspace and only when the mission of the flight requires otherwise, an aircraft shall not be flown less than 1,000 feet above the highest terrain, surface of the water, or obstacle within 22 miles of the intended line of flight.

b. When out of controlled airspace and over designated mountainous terrain, as shown in appropriate DOD FLIPs, an aircraft shall not be flown less than 2,000 feet above the highest terrain or obstacle within 22 miles of the intended line of flight.

c. In controlled airspace, an aircraft shall not be flown at less than the minimum en route altitude or the altitude specified by the agency exercising control over the airspace concerned when operating in IFR conditions.

d. Authorized missions may be flown at lower altitudes than specified above when operating on published IFR military training routes (IRs) that have been developed in accordance with FAA Handbook 7610.4, Special Military Operations.

5.3.2 Instrument Departures

5.3.2.1 Takeoff Minimums

a. Special instrument rating — No takeoff ceiling or visibility minimums apply. Takeoff shall depend on the judgment of the pilot and urgency of flights.

b. Standard instrument rating — Published minimums for the available nonprecision approach, but not less than 300-foot ceiling and 1-statute mile visibility. When a precision approach compatible with installed and operable aircraft equipment is available, with published minimums less than 300/1, takeoff is authorized provided the weather is at least equal to the precision approach minimums for the landing runway in use, but in no case when the weather is less than 200-foot ceiling and 1/2-statute-mile visibility/2,400-foot runway visual range (RVR).

5.3.2.2 Standard Instrument Departure (SID). At locations where SIDs are available, pilots are encouraged to utilize them for each IFR departure, provided no unacceptable flight degradation will ensue. An appropriate SID procedure should be selected during preflight planning for pilots to realize the greatest benefit from standardization of instrument departures and to have a clear course of action to follow in the event of communication failure.

Note

For formation instrument departures and approach procedures, see paragraph 5.1.9.

5.3.3 Instrument Approaches and Landing Minimums

5.3.3.1 General. Approved instrument approach procedures are published in DOD FLIPs (Terminal) or other similar type publications. Landing minimums for precision and surveillance radar approaches are published in DOD FLIP (En Route) IFR-Supplement. For straight-in approaches, pilots shall use RVR, if available, to determine if visibility meets the weather criteria for approaches set forth in the following subparagraphs. Prevailing visibility shall be used for circling approach criteria. Helicopter required visibility minimum may be reduced to one-half the published visibility minimum for Category A aircraft, but in no case may it be reduced to less than one-fourth mile or 1,200 feet RVR. Helicopter procedures visibility may not be reduced. Helicopter procedures and reduced Category A visibility recognize the unique maneuvering capability of the helicopter and are based on airspeeds not exceeding 90 knots on final approach.

contact lost," "too high/low for safe approach," or "too far right/left for safe approach."

b. Execution of the missed approach is mandatory for condition d above. Controller phraseology is "Execute missed approach," and the reason for the order (i.e., "Aircraft ahead of you has taken the arresting gear"); or the controller may issue instructions to climb and maintain a specific altitude and fly a specified heading and the reason for such instructions.

Note

Pilots may execute a missed approach at their own discretion at any time.

5.3.3.7 Practice Approaches. The provisions of this section are not intended to preclude a single-piloted aircraft from executing practice approaches (no landing intended) at a facility where weather is reported below published minimums when operating with an appropriate ATC clearance. The facility in question must not be filed destination or alternate and the weather at the filed destination and alternate must meet the filing criteria for an instrument clearance as set forth in this instruction.

5.3.3.8 Tower/Approach Control Responsibilities. A Navy or Marine Corps tower/approach control facility serving an airport shall keep the pilot informed of the latest reported weather and actual field conditions. Every effort shall be made to inform the pilot as well as the controller (in case of radar approaches) of the most current ceiling, runway visibility, surface wind, and runway conditions. That is particularly important during periods of rapidly changing weather conditions such as fog, snow, and other phenomena that reduce visibility and braking action.

Note

Certain naval air traffic controllers certified in accordance with the guidance contained in NATOPS Air Traffic Control Facilities Manual are authorized to record and disseminate changing tower visibility observations directly to the pilot when prevailing visibility is less than 4 miles.

5.4 HELICOPTER OPERATIONS

5.4.1 Helicopter Operations in Class B, C, or D Airspace

5.4.1.1 Tower Clearance. When operating within class B, C, or D airspace, either tower frequency or an appropriate control frequency shall be monitored at all times.

5.4.1.2 Autorotations. Practice autorotations shall be conducted within the limits of the field boundary over a surface upon which a full autorotation can be safely completed and that is readily accessible to crash, rescue, and firefighting equipment. Practice autorotations shall require the specific approval of the tower.

5.4.1.3 Altitude. Helicopter flights within class B, C, or D airspace shall be in accordance with the local Air Operations Manual. Where no other guidance is provided, pilots shall not exceed 500 feet AGL unless specifically cleared by the tower or other control agency. Pilots shall avoid flying over areas at altitudes where their rotor wash could result in damage to aircraft, property, or personnel.

5.4.1.4 Ground Operations. Air taxi/ground operations shall be conducted with sufficient horizontal separation to preclude damage to aircraft, property, or personnel. Pilots shall operate with the minimum required power while on the ground and shall be particularly alert to prevent foreign object damage (FOD) and/or gust damage to their own and other aircraft.

5.4.2 Helicopter Terrain Flight Operations. Helicopter terrain flights (low level, contour, nap of the Earth (NOE)) shall be conducted only as operational necessity dictates, in training scenarios executed within designated training areas, or as published procedures and clearances prescribe.

5.4.3 Helicopter Night Hover Operation Over Water. Night/low visibility hover operations over water shall be conducted using aircraft equipped with operable automatic hover systems (i.e., coupler/Doppler/AFCS equipment) on all occasions when a natural horizon visible from the cockpit is not available to assist the pilot in establishing/maintaining a stable hover.

5.5 REDUCING FLIGHT-RELATED DISTURBANCES

5.5.1 Annoyance to Civilians and Endangering Private Property. Flights of naval aircraft shall be conducted so that a minimum of annoyance is experienced by persons on the ground. It is not enough for the pilot to be satisfied that no person is actually endangered. Definite and particular effort shall be taken to fly in such a manner that individuals do not believe they or their property are endangered. The following specific restrictions apply in view of the particularly unfavorable effect of the fear, extreme annoyance, and damage that can be inflicted.

range. The restricted area controlling authority must specifically approve such usage and is responsible for coordination of airspace and target/range scheduling to ensure protection of other restricted area users and target/range personnel. The operational commander conducting the exercise is responsible for ensuring the firing or drops are conducted in the specified airspace and impact the scheduled surface target/range.

5.5.8.2 Nonnaval Commands. Nonnaval commands may be authorized to expend ordnance in restricted or warning area airspace for which Navy or Marine Corps commands are designated controlling authority, provided the criteria specified above are observed and the using service, by written agreement, assumes complete responsibility for any damages resulting from such use.

5.5.8.3 Emergency Jettisoning. Nothing in the above precludes emergency jettisoning of external stores through extensive cloud cover; pilots are directly responsible for their actions and must take every possible precaution to minimize danger to other aircraft and persons/property on the surface.

5.6 FLAMEOUT APPROACHES

5.6.1 Actual Flameout Approaches. Actual flameout approaches shall not be attempted unless it is impossible/impractical to abandon the aircraft.

5.6.2 Simulated Flameout Approaches. Simulated flameout approaches are prohibited.

5.7 FLIGHT OPERATIONS WITH NIGHT VISION DEVICES

5.7.1 General. NVDs greatly expand the capability and survivability of night tactical flight profiles flown against modern threats. Flying with NVDs is authorized for units and types of aircraft for which a valid requirement exists. Appropriate commanders shall ensure issuance of and adherence to specific instructions and standard operating procedures for all aspects of NVD flying.

5.7.2 Operating Limitations

a. NVD operations using image intensifying devices, such as AN/PVS-5, AN/AVS-6, or MXU-810/U (CATSEYEs), shall be conducted in VMC. Flight in IMC for purposes of conducting standard instrument departures and instrument approaches is permitted while under positive radar control. Entering IMC during VFR training is prohibited. Inadvertent IMC procedures shall be briefed for all NVD flights.

b. Aircraft interior lighting should be NVD compatible to the maximum extent possible.

c. Aircraft exterior lighting shall comply with applicable FAA regulations unless exemptions have been approved. However, the anticollision lights need not be lighted when the pilot in command determines that, because of operating conditions, it would be in the interest of safety to turn the lights off. In restricted areas, position lights of multiaircraft flights of up to four aircraft on NVDs may fly with lead through dash three's navigation and anticollision lights off. If applicable, formation and blade tip lights shall be on at the highest intensity consistent with NVD compatibility. The last aircraft in each flight shall have navigation lights on at the highest intensity consistent with NVD compatibility and anticollision lights on.

d. Minimum illumination requirements shall be established by CNO/CMC for the conduct of NVD training flights/missions. The approved method of deriving illumination is from the NVD Light Level Planning Calendar computer program. Illumination levels must be tempered with sound judgment and the effects of cloud cover, humidity, haze, dust, low moon angles, etc., considered. For characterization purposes, low light as used in Appendix H, page H-3, is defined as moonlight level less than 0.0022 lux. Other than low light is defined as moonlight level greater than or equal to 0.0022 lux.

e. NVD aircrews shall complete an approved NVD training syllabus and be certified by the commanding officer with a NATOPS flight qualification jacket entry for NVD operations. Training should include demonstrations of the limits to NVD capabilities imposed by environmental conditions and human factors. Attendance at an NVD training facility is strongly recommended.

f. NVD instructors shall complete an approved NVD IUT training syllabus and be certified by the commanding officer with a NATOPS flight qualification jacket entry for NVD instructional flights.

g. NVD designated aircrew shall meet currency requirements as specified in the individual aircraft NATOPS manual, functional wing directives, and/or the USMC Aviation Training and Readiness manual (MCO 3500.14). Qualification/currency requirements may vary for different mission areas, (i.e., shipboard operations, overland navigation,

CHAPTER 6

Air Traffic Control

6.1 APPLICABILITY

This chapter supplements the sources listed in paragraph 1.2 and provides additional rules and procedures of particular importance for the operation and control of naval aircraft.

6.2 AIR TRAFFIC CONTROL PROCEDURES

6.2.1 Authorized Personnel. Only personnel properly qualified in accordance with the NATOPS Air Traffic Control Facilities Manual shall exercise control over aircraft exclusive of actual/simulated shipboard or tactical operations under the control of non-ATC certified personnel.

6.2.2 Control Tower. At airfields with an operating control tower, the control tower shall exercise control of all aircraft operating to, from, or on the airfield and within class B, C, or D airspace. Prior approval from the tower shall be obtained for all taxi, takeoff, landing, towing, and related operations. Preventive control may be provided to eliminate repetitious, routine approval of pilot action; in that case, the controller will issue instructions or advice only if a situation develops that needs corrective action. Prior to preventive control service being provided, appropriate directives shall be issued to ensure that affected ATC personnel and aircraft operators being afforded preventive control are aware of the procedures being used.

6.2.3 Control of Formation Flights. Formation flights shall be controlled as a single aircraft unless the formation leader requests otherwise.

6.2.4 Taxi Instructions

a. Taxi Clearance — Taxi clearance shall be obtained prior to taxiing. Formation leaders may obtain taxi clearance for their entire flight. A clearance to "taxi to" the runway is a clearance to cross all intersecting runways but is not clearance to "taxi on" the assigned runway. Ground control shall clear aircraft from the parking area to the warmup areas. Pilots shall read back all "hold/hold short" instructions received during taxi. Aircraft shall remain on ground control while in the warmup area until cleared to change frequency or until ready for takeoff clearance.

b. Overtaking — No taxiing aircraft shall overtake or pass another aircraft except with tower approval.

c. Taxi Speed — All aircraft shall be taxied at a safe rate of speed and under positive control of the pilot at all times.

d. Emergencies — When the tower is controlling an aircraft in an emergency, aircraft on the ground shall taxi clear of the runway. Those on the taxiway shall hold until authorized to proceed. All aircraft shall exercise radio discipline for the duration of the emergency. Pilots of taxiing aircraft sighting emergency vehicles displaying the flashing red light on the field shall stop and hold their positions until authorized to proceed by radio or light signals from the tower.

6.2.5 Departure Instructions

a. ATC Clearance — Aircraft departing on IFR flight plans will receive their ATC clearance on ground control or designated clearance delivery frequency. Departing pilots shall read back clearances differing from the filed flight plan.

b. Takeoff Clearance — Aircraft shall hold well clear of the duty runway until cleared by the tower for takeoff or position and hold, and the aircrew have ensured that there is no conflicting traffic for runway use. Pilots shall read back "position and hold" and "hold short" instructions. When cleared for takeoff, aircraft shall take off without undue delay or clear the duty runway.

c. Frequency Changes — Single-piloted aircraft shall not be required to change radio frequency and/or transponder code settings until reaching an altitude of 2,500 feet above surface except when the aircraft is to level off and operate at an altitude

approach. The controller shall remind the pilot to check wheels down at an appropriate position in the pattern unless the pilot has previously reported wheels down.

d. Lost Communication — If unable to establish radio communication, comply with the procedures contained in the Flight Information Handbook. Flashing of the landing/taxi lights is recommended in addition to the "wing rock" procedure.

6.3.1 Reduced Same Runway Separation. Strict adherence to the separation criteria for arriving and departing aircraft set forth in FAA Handbook 7110.65 may, in some circumstances, cause operational/training delays and airport congestion. Factors such as mission of the facility, airfield design, and aircraft models being supported may indicate that reduced separation standards are feasible and can be applied while maintaining adequate margins of safety. Subject to prior approval by the immediate senior in the chain of command, naval aviation shore facility commanders are authorized to establish and apply reduced separation criteria for Navy and Marine Corps aircraft at the airfields under their command with the following stipulations:

a. Such action is necessary to meet operational/training requirements.

b. In the case of formation instrument approaches, ceiling and visibility minimums stated in paragraph 5.1.9.6 apply.

c. Reduced separation criteria are applied only between aircraft of similar performance characteristics or when the preceding aircraft has higher performance than the following.

d. Prior to application of reduced separation criteria, appropriate directives are issued delineating the specific standards to be applied (i.e., distance between aircraft using alternate sides of the runway, distance between aircraft using centerline, aircraft model/classes to which reduced standards apply, etc.).

e. Appropriate measures have been instituted to ensure that affected ATC personnel and aircraft operators are aware of the criteria being applied.

6.3.1.1 Aircraft of Other Military Services. The conditions of paragraph 6.3.1 may also apply to aircraft of other military services when such conditions are agreed to in writing by the cognizant operational commander of the other service and the Navy or Marine Corps shore facility commander.

6.3.2 Procedure for Checking Wheels Down and Locked. When a pilot has any doubt as to the gear being down and locked, the pilot shall promptly notify the controlling agency. Further, the pilot should request an airborne visual check, preferably by a similar model aircraft if one is available and such a procedure is considered practicable and safe. If not possible, the pilot should request a ground visual check by the most qualified personnel available. If doubt exists as to gear being down and locked, the pilot shall notify the control tower, which will in turn direct the pilot to perform a low pass in front of the tower for the purpose of a visual check. Should doubt exist after a visual check, crash and rescue equipment shall be available for precautionary landing. After a landing rollout, the aircraft shall not turn off the runway until ground personnel have made a visual check of the gear and gear pins have been installed. If a known "not locked" or "up" condition exists, normal crash alert procedures shall be instituted.

6.3.3 Runway Condition Readings/Braking Action Advisories. Commanding officers of naval aviation shore facilities shall issue runway braking action advisories. The Flight Information Handbook contains the necessary correlation data enabling pilots to convert the numerical runway condition indicator as it appears at the end of the weather sequence to braking action information.

6.4 SEPARATION OF NAVAL AIRCRAFT

In the interest of aviation safety, separation of all flights of naval aircraft from other air traffic shall be obtained by operating in a controlled environment to the maximum extent possible without degrading the mission. The following airspace is prescribed:

a. Airspace over the 50 United States and adjacent coastal waters within the 12-mile limit.

b. Airspace offshore of the contiguous United States and Alaska outward to the limit of the domestic ARTCC boundaries; airspace in the Hawaiian Airways Area; and airspace in the San Juan Domestic Control Area.

c. Airspace in the vicinity of other U.S. territories and overseas airfields as prescribed by local commanders.

6.4.3 Flight Over the High Seas

a. General — International law recognizes the right of aircraft of all nations to fly in airspace over the high seas. By convention, procedures for international flight are prescribed and certain nations have agreed to provide air traffic services in designated airspace over the high seas. Naval aircraft are operated in accordance with ICAO procedures presented in the DOD FLIP General (Planning) and OPNAVINST 3770.4, which discusses the use of airspace by U.S. military aircraft, firings over the high seas, and defines "due regard" operations for military aircraft.

b. Policy for flight within domestic ARTCC boundaries, in the Hawaiian Airways Area, and in the San Juan Domestic Control Area. Within those areas:

(1) The United States provides air traffic services consistent with those adopted for airspace under domestic jurisdiction. While naval aircraft may operate on a "due regard" basis in the event of emergency or operational necessity, it is Navy policy to utilize domestic ATC services and procedures to the extent that the military mission permits.

(2) Where special use airspace, ATC-assigned airspace, or an altitude reservation has been established, fleet area control and surveillance facility (FACSFAC) or military radar unit (MRU) control services and procedures apply, as appropriate.

(3) Communication — In addition to the foregoing, when radar control of fixed-wing aircraft is being provided by a Navy ship or shore station in airspace managed by a FACSFAC, continuous two-way communication is required between that ship or shore station and the FACSFAC. Additionally, the FACSFAC must maintain two-way communication with an appropriate FAA facility to coordinate operations as required by FACSFAC procedures.

6.4.4 Exemptions. Local commanders are authorized to grant exemptions to the provisions of this paragraph where necessary to meet operational requirements. In each case, a copy of such exemption shall be provided to CNO (N885F) via the chain of command with a copy to the cognizant NAVREP. Such exemptions shall contain comments concerning the adequacy of local arrangements with FAA, navigation aids (NAVAIDs), airspace, and control facilities, and appropriate recommendations.

6.5 LETTERS OF AGREEMENT

The NATOPS Air Traffic Control Facilities Manual contains procedures for executing letters of agreement concerning establishment of joint FAA/USN air traffic control facilities and delegation of approach control authority to naval activities. Guidance contained there may also be used in effecting other local letters of agreement for the control of air traffic. Information copies of local letters of agreement not specifically addressed in the NATOPS Air Traffic Control Facilities Manual and its changes shall be forwarded to CNO (N885F).

6.6 ANTISUBMARINE WARFARE OPERATIONS

Letters of agreement between certain naval commands and the FAA have been drawn up for operations in international airspace so that maximum use may be made of FAA services. FAA oceanic control activities and NAVREPs maintain current copies of such agreements.

6.6.1 Special ASW Air Traffic Control Procedures

6.6.1.1 General. Special procedures have been developed to assure that aircraft departing on active ASW missions do not encounter air traffic control delays.

6.6.1.2 Security Control of Air Traffic and Air Navigation Aids (SCATANA) Plan. This plan, OPNAVINST 3722.30 states:

> "There are certain other military operations vital to national defense. These operations are limited to active air defense interceptor missions, active antisubmarine warfare missions, and launch of the SAC alert force. These operations are to be given priority over all other military and civil aircraft by procedural handling by ATC for the particular operation as specified in coordinated agreements or authorizations."

Joint letters of agreement between naval commands and FAA become the coordinated agreements specified in SCATANA.

6.6.1.3 Returning Aircraft. FAA Manual 7610.4, Special Military Operations, addresses special handling for

CHAPTER 7

Safety

7.1 FLIGHT PRECAUTION

7.1.1 General Precautions

7.1.1.1 Conduct of Flight. Pilots shall conduct their flights in such a manner as to avoid an unjustifiable hazard. Each pilot must exercise prudent judgment and take proper action (including modifying NATOPS procedures) when dictated by emergencies that endanger life or property. The decision to abandon aircraft should be tempered by the pilot's responsibility for the safety of lives that may be endangered by subsequent flight of a pilotless but controllable aircraft.

7.1.1.2 Liferafts. On overwater flights the number of persons in an aircraft shall not exceed capacity of the liferafts carried except as dictated by operational necessity.

7.1.1.3 Feathering or Securing Engines. During simulated emergency operations and functional checkflights of multiengine aircraft, no propeller shall be fully feathered or engine secured at an altitude below 4,000 feet above the terrain except as follows:

a. Aircraft undergoing test and trials as required by COMNAVAIRSYSCOM

b. Aircraft whose design characteristics include normal operations with propellers feathered or engines secured below 4,000 feet.

Four-engine aircraft may operate with one propeller feathered or with one engine secured at altitudes of 1,500 feet above the terrain or higher when required for checkflights or training purposes subject to restrictions contained in the applicable NATOPS manual.

7.1.1.4 Conduct of Passengers. Passengers embarked in transport aircraft shall remain in its passenger compartments and shall not enter the pilot or crew compartments except on specific invitation of the aircraft pilot in command.

7.1.1.5 General Flight Personnel/Passenger Restrictions. Except for emergency or operational necessity, the number of persons aboard naval aircraft engaged in flight operations such as pilot checkout, night familiarization, carrier qualifications, instrument flying in single-piloted aircraft, or functional check-flight and evaluation shall be limited to those required to properly operate the aircraft and accomplish the assigned mission. When applicable, special precautions shall be observed in the weight and balance of the aircraft.

Note

Simulated emergencies that may affect aircraft controllability shall not be conducted anytime passengers are aboard the aircraft.

7.1.1.6 Operation of Battery Powered Devices. Crew/passengers shall not operate electronic equipment/ battery powered devices such as radios, tape players, cellular phones, razors, calculators, etc., without approval of the pilot in command while the aircraft is in flight. Cellular telephones shall not be operated in naval aircraft while airborne. All cellular phones shall be turned off while airborne.

7.1.1.7 Loading/Offloading. Whenever a fixed-wing aircraft is engaged in loading or offloading of passengers, engine(s) on the side of the aircraft from which loading or offloading is taking place shall normally be shut down. When the engine(s) cannot be secured during loading/offloading evolutions without adversely affecting the successful completion of the mission, care shall be taken to ensure that passengers are properly briefed and appropriate safety precautions are observed.

7.1.1.8 Adequate Cockpit Visual Lookout. The pilot in command of a naval aircraft with side-by-side cockpit seating arrangement shall be responsible for both seats being occupied at all times. On occasions when either pilots or copilots are absent from their seats, they should be relieved by another pilot or qualified crewmember who will carry out the responsibilities expected of a lookout. Functional checkflights of single-piloted aircraft may be exempt from this

Under such circumstances, the briefing shall be the responsibility of the cognizant local commander(s).

7.1.3.2 Loose Articles. Prior to aircraft takeoff, an inspection shall be made to ensure that no loose articles, such as rags, waste, tools, etc., are present that might foul the controls. Articles shall be properly stowed to prevent their coming adrift and being lost overboard or damaging the aircraft during maneuvers. Care shall be taken to ensure proper load-balance distribution of all weights.

7.1.4 Takeoff and Landing Checklists. NATOPS checklists shall be provided in each aircraft for mandatory use by pilots to assist them in preparing the aircraft for takeoff and landing. They shall be followed carefully and in their given order to ensure that all steps are performed.

Note

In compliance with aircraft military design specifications, most aircraft are provided with abbreviated takeoff and landing checklists placarded (or etched) on instrument panels. The checklists are an additional reminder to flight personnel to complete required NATOPS manual checklists and serve as a double check on the proper positioning and status of major aircraft systems.

7.1.5 Power Failure on Multiengine Aircraft

7.1.5.1 Twin-Engine Aircraft. In the event of power failure or whenever an engine is stopped as a precaution on an aircraft that has two engines, the pilot in command shall land at the nearest suitable airport, in terms of time, provided weather conditions, terrain, and facilities available indicate that a safe landing can be accomplished.

7.1.5.2 Aircraft With Three or More Engines. In the event of a single power failure or whenever not more than one engine is stopped as a precaution on an aircraft that has three or more engines, the pilot in command may proceed to a selected destination if, after considering the following, the pilot in command decides that proceeding to that destination is as safe as landing at the nearest suitable airport:

a. The nature of the malfunction and the possible mechanical difficulties that may occur if flight is continued

b. The altitude, weight, and usable fuel at the time of engine stoppage

c. The terrain and weather conditions en route and at suitable landing points

d. Possible air traffic congestion at suitable landing points

e. Pilot familiarity with the airport to be used.

7.1.5.3 Reports. Pilots in command shall report in-flight power failures and/or precautionary engine stoppages that affect safety of flight to the appropriate ground station as soon as practicable and shall keep appropriate operational control centers and/or traffic control facilities advised of their intentions and flight progress.

7.1.6 Distress and Emergency

7.1.6.1 Distress Procedures. Distress frequencies, procedures, signals, and call signs may vary among theaters of operations and are contained in various directives such as NWP 19, DOD FLIPS, and ICAO publications. A copy of the applicable procedures and signals shall be carried in the cockpit of all naval aircraft and may be used in time of peace regardless of the degree of radio silence that may be imposed during tactical exercises. They will be used in time of war when prescribed by the officer in tactical command and may be amplified as necessary to cover local conditions or special operations.

7.1.6.2 Emergency Procedures. Forced landing, lost aircraft, and search and rescue procedures applicable to aircraft are contained in various directives such as NWPs; Joint Army, Navy, Air Force Publications (JANAPs); and ICAO publications. Commanding officers shall ensure that each pilot under their command is thoroughly cognizant of applicable directives.

7.1.7 Ditching and Bailout

7.1.7.1 Ditching Precautions. When an aircraft must be crash landed on either land or water, the sudden shifting of cargo, equipment, and other heavy items may cause injury or loss of life. All units shall arrange and secure equipment in their aircraft to guard against such dangers. Emergency gear such as liferafts should be properly stowed for quick availability. Responsibility for proper security of cargo and equipment lies with the pilot in command of each aircraft.

(4) In helicopters, avoid hovering with engine exhaust to windward.

(5) During preflight inspection, ensure that all fuselage openings, torpedo doors, and other access doors are properly secured.

7.2.1 Safety Belts and Shoulder Harnesses. Each person's safety belt and shoulder harness shall be worn and tightened prior to takeoff and shall be worn until completion of the flight except when necessary activities require temporary removal. Inertia reels, where provided, shall be manually locked for all takeoffs and landings and at all other times when high g forces may be encountered except where the procedure is detrimental to safe operation. The number of persons over 2 years of age embarked in a naval aircraft for flight shall be restricted to the number for which there are adequate seats and safety belts. During takeoffs, landings, and at other times as specified by the pilot in command, each person over 2 years of age onboard transport aircraft shall occupy a seat or berth and be secured with the safety belt provided for that purpose. TYCOMs may authorize waivers of cabin seating requirement for helicopters when operational environment or aircraft configuration/load requirements dictate for the accomplishment of essential training and operations. Waiver should be granted with following guidelines:

a. Only applies to special operations training and missions.

b. Not to be used for routine operational training or personnel transfers. Applies only when unique special operation requirements exist for a specific mission or exercise.

c. When seats are removed, passengers will be restrained by an appropriate alternate means.

d. If mission profile requires waiver of seats/seatbelts/restraints for one part of the mission, then passengers shall use seats/seatbelts/restraints for all other phases of the mission.

WARNING

Walkaround belts do not provide impact protection; therefore, use of those belts shall be restricted to only those occurrences when mission accomplishment requires persons to be out of their seat. Such belts shall not be worn when strapped into a seat.

Note

Flight personnel leaving their seats to open a hatch or work in the vicinity of an open hatch shall wear an approved crewman aircraft belt (walkaround) during time spent out of the seat.

7.2.2 Reclining Back Seats. Personnel embarked in aircraft equipped with seats that have a reclining back shall be instructed to lock the seat in the erect position for all takeoffs, landings, and emergencies.

7.2.3 Unusual Performance of Aircraft. Any abnormal, erratic, or other kind of unusual performance of an aircraft or its powerplant, including material failures, shall be reported in accordance with OPNAVINST 3750.6 and OPNAVINST 4790.2.

CHAPTER 8

Aeromedical and Survival

8.1 GENERAL

To improve the survivability of flight personnel, CNO (N88B) has implemented the aircrew survivability enhancement program (ASEP). Subelements of this program are aviation life support systems (ALSS), safety, human performance, and training. Guidelines and requirements contained here are considered minimum. Recommendations for changes or improvement in equipment, procedures, or training shall be addressed via the chain of command to CNO (N88B) for evaluation and, if appropriate, implementation.

8.2 AVIATION LIFE SUPPORT SYSTEMS

The safety and survival equipment specified in paragraphs 8.2.1, 8.2.2, 8.2.3, and 8.2.4 of this manual are minimum requirements. Deviations shall be specified by the NATOPS flight manual for individual model aircraft. The latest available equipment, as authorized by aviation crew systems manuals, NAVAIR 13-1-6.1 through NAVAIR 13-1-6.10, shall be used by aircrew personnel and passengers for flight in all naval aircraft.

8.2.1 Aircrew Personal Protective Equipment Requirements

8.2.1.1 Aircrew

Note

Items marked * may be omitted by flight personnel flying in fixed-wing cargo/transport class aircraft if such flight does not involve carrier operations.

*a. Protective helmet — The helmet and visor housing shall be 100 percent covered with white reflective tape except as modified by approved aircrew system changes. Up to 30 square inches of light-colored reflective tape may be applied so long as the white tape remains visible from all directions. Operational commanders are authorized to waive the requirement for reflective tape on helmets to meet operational requirements. The use of reflective tape may degrade NVD performance.

Note

Up to 65 square inches of nonwhite reflective tape is authorized on the HGU-64/P visor housing and a locally fabricated international orange cover is authorized for use on the HGU-64/P in Antarctic environment. Visor housings will be taped in accordance with previous paragraph and all covers removed while in CONUS.

*b. Aircrew safety/flyer boots.

*c. Fire resistant (aramid) flight gloves — These gloves may be removed on low-level overwater flights and launch or recovery operations aboard ship.

*d. Fire resistant flight suit (aramid) — Aramid or cotton-type undergarments shall be worn. Suitable fire-resistant unit issue clothing (aramid) may be substituted for the flight suit for flight personnel in fixed-wing cargo/transport class aircraft.

e. Identification tags — Two tags on a chain worn around the neck.

*f. Survival knife and sheath — Do not wear exposed or attached to the life preserver.

*g. Personal survival kit — Appropriate to the area of operations.

*h. Signal device — Required for all night flights and flights over water or sparsely populated areas.

i. Survival radios and beacons

(1) Survival radios

(a) An approved voice-capable survival radio shall be carried by each air crewman on all

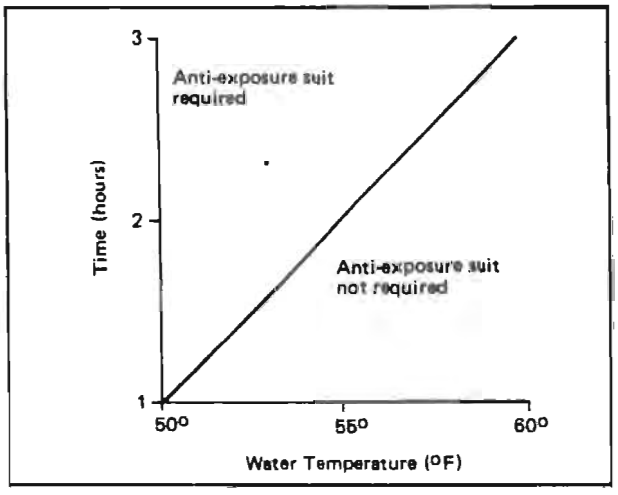


Figure 8-2. Antiexposure Suit Requirement

(b) Determine the lowest water temperature in the mission area during the time period of flight.

(4) When water temperature is below 60 °F and antiexposure suits are not required, flight equipment ensemble shall include antiexposure and aramid undergarments. Wearing double layers of these undergarments can significantly improve antiexposure performance.

(5) Final determination with regard to actual wearing of antiexposure suits shall be made by the CO or officer in charge (OIC) of the unit concerned based on all pertinent factors (i.e., class aircraft, type and duration of assigned mission, ambient cockpit temperatures, suit ventilation features, combat versus noncombat environment, availability of SAR facilities).

(6) Only approved combinations of antiexposure suit inner and outer liners authorized by NAVAIR 13-1-6.7, Aircrew Personnel Protective Equipment, shall be worn.

(7) When antiexposure suits are not actually worn by occupants of aircraft in which the use of quick-donning suits is practical (i.e., large helicopters and patrol class aircraft) such suits shall be carried for each flight personnel as part of the aircraft survival equipment on flights conducted under the temperature conditions stated above. Exceptions to the above requirements are as follows:

(a) Fleet tactical support squadrons and other commands operating transport class aircraft in routine transport operations. (Functional checkflights, flights for airlift of hazardous cargo, and flights in combat zones are examples of other than routine operations.)

(b) When worn with approved inner garments, the full-pressure suit is authorized for use in place of the continuous-wear antiexposure suit.

Note

The wearing of full-body antiexposure rubber wetsuits can result in rapid onset of fatigue as a result of dehydration. Since fatigue is more prevalent with the wearing of wetsuits, the rest, sleep, and flight time requirements of paragraph 8.3.2 may not be sufficient.

l. Antiblackout suits shall be worn and connected on all flights in aircraft equipped for their use.

m. Pressure suits — Flight in tactical jets or tactical jet training aircraft above FL 500 shall be accomplished only if all occupants of the aircraft are protected by a functioning full-pressure suit or partial-pressure suit.

n. Inflatable life preservers shall be worn during all flights originating from or terminating on ships or landing platforms. Life preservers shall be readily available when operating from aerodromes in the vicinity of coastal waters or when operating from inland aerodromes where takeoff, route of flight, or approach path is over water. Occupants of ejection seat aircraft shall wear the appropriate life preserver at all times. Life preservers shall be worn when mission requirements dictate operation over water below 1,000 feet exclusive of normal departures or approaches.

WARNING

The LPU life preserver automatic inflation device, FLU-8/P, is designed for use in ejection seat aircraft only. It shall not be worn in aircraft where ditching is a recommended procedure, in helicopters, or on COD flights.

o. Laser eye protection — Aircrew operating in/with aircraft having laser capability and in use shall wear eye protection devices specific to the type laser in use. Units having laser capability shall

AMBIENT ALTITUDE	SINGLE-PILOTED AIRCRAFT	MULTIPILOTED AIRCRAFT		CREW ON DUTY	OTHER OCCUPANTS
		PILOT	COPILOT		
FL 270 and below	R	R	R	R	N/A
Above FL 270 through FL 350	I	I	R	R	R
Above FL 350 through FL 400	O	I or O	I or R	R	R
Above FL 400 through FL 450	O	O	I	R	R
Above FL 450 through FL 500	O	O	I	I	I
Above FL 500	P	P	P	P	P

LEGEND

R – Oxygen shall be readily available.

I – Oxygen shall be immediately available. Helmets shall be worn with an oxygen mask attached to one side or an approved quick-donning or sweep-on mask properly adjusted and positioned for immediate use. Set oxygen regulator to 100 percent and ON.

O – Oxygen shall be used.

P – Pressure suit shall be worn

Note

In multipiloted pressurized aircraft if above FL 270, the pilot at the controls must be using 100-percent oxygen if the other seat is occupied by other than a qualified pilot, except for aircraft equipped with quick-donning masks at both pilot stations where the above rule shall apply above FL 350.

Figure 8-3. Oxygen Requirements for Pressurized Aircraft Other Than Jet Aircraft

8.2.4.3 Tactical Jet and Tactical Jet Training Aircraft. Oxygen shall be used by all occupants from takeoff to landing. Emergency bailout bottles, when provided, shall be connected prior to takeoff.

8.2.4.4 Quantity of Oxygen. The quantity of oxygen aboard an aircraft before takeoff must be sufficient to accomplish the planned mission. In aircraft carrying passengers, there shall be an adequate quantity of oxygen to protect all occupants through normal descent to 10,000 feet.

8.2.4.5 Loss of Pressurization. If loss of pressurization occurs, an immediate descent shall be made to a flight level where cabin altitude can be maintained at or below FL 250 and oxygen shall be utilized by all occupants.

Note

The FL 250 restriction does not apply when a functioning pressure suit is worn.

8.2.4.6 Decompression Sickness. When an occupant of any aircraft is observed or suspected to be suffering from the effects of decompression sickness, 100-percent oxygen will be started and the pilot shall immediately descend and land at the nearest civilian or military installation suitable for safe landing and obtain qualified medical assistance. See paragraph 8.3.2.12b.

PERIOD (DAYS)	SINGLE-PILOTED AIRCRAFT	MULTI-PILOTED (PRESSURIZED) EJECTION SEAT AIRCRAFT	MULTI-PILOTED NONPRESSURIZED AIRCRAFT	MULTI-PILOTED PRESSURIZED AIRCRAFT
1	6.5	12	12	12
7	30	50	50	50
30	65	80	100	120
90	165	200	265	320
365	595	720	960	1120

Figure 8-4. Maximum Recommended Individual Flight Time

b. Weekly maximum flight time for flight personnel of single-piloted aircraft should not normally exceed 30 hours. Total individual flight time for flight personnel of other aircraft should not exceed 50 hours. When practicable, flight personnel should not be assigned flight duties on more than 6 consecutive days.

c. Accumulated individual flight time should not exceed the number of hours indicated in Figure 8-4.

d. When the tempo of operations requires individual flight time in excess of the guidelines in Figure 8-4 or paragraphs 8.3.2.2a and 8.3.2.2b, flight personnel shall be closely monitored and specifically cleared by the commanding officer on the advice of the flight surgeon. Aviation-capable ships that do not have access to flight surgeons for waiving flight time limitations should utilize available general medical officers for medical evaluation. Comments should be made with regard to stress level and adequacy of rest and nutrition. Authorization from the squadron commanding officer and flight surgeon can then be made via message. Commanding officers should assure equitable distribution of flight time commitments among assigned flight personnel, commensurate with additional ground duties that each may be assigned.

Note

Flight operations involving contour, nap of the earth, chemical defense gear, night and night vision devices, and adverse environmental factors (dust, cloud cover, precipitation, etc.) are inherently more stressful and demanding than flying day VFR. The resultant fatigue may have a profound physiological effect upon mission capability. Mission planners should take this physiological threat into account in making modifications to normal crew rest/crew day guidelines.

8.3.2.3 Nutrition. All flight and ground support personnel shall be provided a positive program of information for the establishment and maintenance of good dietary habits. Failure to eat within 12 hours preceding end of flight may impair performance and ability to adequately control aircraft. Reducing diets should be under strict supervision of a flight surgeon.

8.3.2.4 Exercise. Planned physical fitness programs promote health. All levels of command are encouraged to establish approved physical fitness programs for all personnel in accordance with OPNAVINST 6110.1. Due consideration must be given to avoiding contact sports, skiing, etc. Adequate rest periods must be provided for aviators before flying following participation in competitive or particularly tiring sports activity. Twelve hours should normally be adequate.

8.3.2.5 Drugs. Drugs are defined as any chemical that when taken into the body causes a physiological response. All flight and support personnel shall be provided appropriate information by a command drug abuse education program.

a. Legal drugs are those medically prescribed or legally purchased for treatment of illness.

(1) Prescription drugs — Taking drugs prescribed by competent medical authority shall be considered sufficient cause for recommendation of grounding unless their use is specifically approved by a flight surgeon, or a waiver for specific drug use has been granted by BUPERS or the CMC. Consideration shall be given to the removal of ground support personnel from critical duties, for the duration of the drug effects, if appropriate. Medicines such as antihistamines, antibiotics, tranquilizers, sleeping pills, etc., obtained by prescription shall be discarded if all are not used during the period of medication.

(2) Over-the-counter drugs — Because of the possibility of adverse side effects and unpredictable reactions, the use of over-the-counter drugs by flight personnel is prohibited unless specifically approved by a flight surgeon. Ground support personnel shall be briefed on the hazards

(i.e., referral for professional evaluation, short standdown from flight duties, rest and recreation, leave, etc.).

Note

Commanding officers and flight surgeons shall comply with applicable directives pertaining to mental health evaluation of servicemembers (see SECNAVINST 6320.24, Mental Health Evaluations of Members of the Armed Forces). Individuals who fall under "Military Whistleblower Protection" guidelines (SECNAVINST 5370.8) may require additional administrative procedures in conjunction with evaluation. Commanding officers are encouraged to consult with local flight surgeons and legal officers.

8.3.2.10 Immunization/Injections. Flight personnel shall not participate in flight duties for 12 hours after receiving an immunization or injection unless cleared sooner by a flight surgeon. Those showing protracted or delayed reaction shall be grounded until cleared by a flight surgeon.

8.3.2.11 Blood Donation. Although blood donated in small quantities is quickly replaced and does not adversely affect ground activities, the hazards of hypoxia and reduced barometric pressure make it desirable to limit such donations by flight personnel in accordance with the following:

a. Flight personnel shall not be regular blood donors.

b. Flight personnel in combat or flying in a shipboard environment shall not donate blood within 4 weeks prior to such flying.

c. Flight personnel shall not participate in flight duties or perform low-pressure chamber runs for 4 days following donation of 450 cc of blood (1 pint).

8.3.2.12 Hypobaric Exposure. The following restrictions to flight following low-pressure chamber flights or accidental hypobaric exposure (rapid decompression in flight) apply.

a. Flight personnel shall not perform flight duties for 12 hours after exposure to low-pressure chamber flight in excess of 30,000 feet. They may fly during the 12 hours as passengers in aircraft where cabin altitude does not exceed 10,000 feet.

b. Individuals who have experienced a reaction to decompression (vasomotor collapse, unconsciousness, bends, etc.) in flight shall be immediately referred to a flight surgeon. Grounding and clearance shall be in accordance with paragraphs 8.3.2.6 and 8.5.1 of this instruction.

8.3.2.13 Hyperbaric Exposure. Under normal circumstances, flight personnel shall not fly or participate in low-pressure chamber flights within 24 hours following scuba diving, compressed air dives, or high-pressure chamber evolutions. Where an urgent operational requirement dictates, flight personnel may fly within 12 hours of scuba diving, provided no symptoms of aeroembolism/decompression sickness develop following surfacing and the subject is examined and cleared by a flight surgeon. Personnel participating in HEED or device 9H19 training may fly as passengers without restriction. Participation in flight duties is prohibited for 12 hours following HEED or device 9H19 training.

8.3.2.14 Beards. Beards are prohibited for those who use oxygen masks routinely. Flight personnel who do not wear masks routinely shall not wear a beard that would significantly interfere with safe oxygen mask functions during emergency use.

8.3.2.15 Eyeglasses. Corrective eyeglasses shall be worn as prescribed. The requirement to wear corrective lenses will be annotated on the clearance notice.

8.3.2.16 Dehydration. Of all causes of fatigue, one of the most treatable is dehydration. Early stages of dehydration can lead to emotional alterations and impaired judgment. Flightcrew should be aware of the following:

a. Heavily sweetened drinks should be avoided since sugar can slow the absorption of water in the body.

b. Alcohol and coffee (caffeine) are diuretics and will cause the body to lose more than it gains.

c. Ingestion of plain water throughout the day will reduce probability of dehydration and resultant fatigue.

8.3.2.17 Simulator Sickness. Simulator exposure can cause perceptual sensory changes that may compromise safety. The experience of symptoms such as nausea, disorientation, and sweating has occurred in fighter, attack, patrol, and helicopter simulators. Symptoms of simulator sickness may occur during simulator flight and last several hours after exposure. In some cases, the onset of symptoms has been delayed as much as 18 hours. The symptoms have occurred in both motion-base and fixed-base simulators to pilots and other

8.4.2 Survival Training Programs

8.4.2.1 Naval Aviation Physiology Training Program/Naval Aviation Water Survival Training Program. Initial and refresher training shall be required for all officer and enlisted aircrew. The maximum interval between training measured from the last day of the month in which the training was conducted shall not exceed 4 years. Additionally, NAPTP/ NAWSTP refresher training shall be required as follows:

a. For personnel who do not fly in a crew position for a period of 18 consecutive months prior to resuming flight status.

b. For personnel who transition to a different category of aircraft (as listed in Appendix E, Figures E-1 and E-6) during their 4-year cycle.

c. For flight personnel being assigned to a duty station where the appropriate refresher training is not available and current qualifications will expire during their tour. Commanding officers shall ensure that requirements are met before detaching personnel.

d. Personnel shall complete NAPTP/NAWSTP prior to commencement of a deployment if their qualifications will expire during that deployment.

Note

Aircrew in a DIFDEN status are not required to receive refresher NAPTP/ NAWSTP training. Personnel under DIFDEN waivers are required to complete all appropriate NAPTP/NAWSTP training.

e. Personnel receiving NAWSTP training (N5, R1, R2, R3) at training activities outside of the Continental U.S. (OUTCONUS) shall complete remaining refresher training within 90 days after return to CONUS if ordered to duty in a flying billet. Qualification expiration is based on date of conditional qualification.

8.4.2.2 Active Duty Reserves (TAR/FTS) and Selected Reserve (SELRES/SMCR). Aircrew personnel ordered to units operating under the control of COMNAVAIRESFOR and CG FOURTH MAW shall receive appropriate initial training. Refresher NAPTP/ NAWSTP training shall be completed at a CNO-approved site utilizing appropriate, available training devices. Refresher HEED (N7) training shall be completed at a site specifically approved for N7 training. Navy and Marine Corps Reserve aircrew personnel ordered to units flying in other than Reserve aircraft shall comply with the appropriate training criteria. Waivers of training criteria for Reserve personnel are in accordance with paragraph 8.4.2.7 of this section.

8.4.2.3 Records. Personnel reporting for NAPTP/ NAWSTP training shall deliver their NATOPS flight personnel training/qualification jackets (OPNAV 3760/32) with a current Aeromedical Clearance Notice (BUMED 6410/2) to the training site. The training site shall ensure that appropriate entries are made in the NATOPS flight personnel training and qualifications jacket. Completed and/or obsolete forms shall not be removed from the NATOPS jacket and discarded. They are to be retained as a permanent part of the NATOPS jacket.

8.4.2.4 Physical Prerequisites for Participation in the NAPTP/NAWSTP

a. All prospective and designated flight personnel on competent flight orders shall have an Aeromedical Clearance Notice (BUMED 6410/2) prior to participation in the NAPTP/NAWSTP. The documentation shall be signed by a naval flight surgeon (FS), aviation medical examiner (AME), or aviation medical officer (AMO).

b. With regard to naval aviator and enlisted aircrew candidates entering initial aviation training at the Naval Aviation Schools Command (NAVAVSCOLSCOM), the following exceptions to paragraph 8.4.2.4a are authorized:

(1) For cases where NAVAEROPMEDINST has completed a flight physical but cannot issue an Aeromedical Clearance Notice (BUMED 6410/2) pending administrative processing, NAVAEROPMEDINST may certify the candidate physically qualified to commence initial training utilizing NAVAEROPMEDINST 6120/2.

(2) Naval aviator candidates and aircrew candidates awaiting waiver approval for a physical defect may be transferred from NAVAVSCOLSCOM to further aviation pipeline training upon recommendation from NAVAEROPMEDINST and commanding officer, NAVAVSCOLSCOM. In no case shall they be allowed to commence actual flight training until any required waiver is approved by BUPERS or CMC (ASM) and an Aeromedical Clearance Notice (NAVMED 6410/2) is issued by a flight surgeon.

c. Selected passengers, project specialists, special operations personnel, midshipmen, VIPs, government contractors, Federal Government agencies (except

CLEARANCE FOR NONMILITARY/NONAIRCREW PERSONNEL TO FLY IN USN/USMC AIRCRAFT

THIS FORM SHALL BE PROVIDED BY THE FLIGHT APPROVING AUTHORITY

TO THE APPLICANT PLEASE READ CAREFULLY: You are requesting clearance to fly in military aircraft as a nonaircrew observer. Prior to flying, you are required to complete aviation physiology and aviation water survival training. These training programs require a high level of fitness and stamina. You will be required to complete training in complete flight gear, including helmet, gloves, boots, flight suit, parachute harness, and survival vest. Training includes a 25-yard surface swim, treading water for 2 minutes, drownproofing for 2 minutes, and orally inflating your life preserver. Underwater egress training requires you to swim 15 yards underwater in a flight suit and boots. Additionally, you will receive hypoxia recognition training in a hypobaric chamber to simulated altitude of 25,000 feet. Actual flight may be in high performance ejection seat aircraft capable of sustained high g-force maneuvering. To obtain clearance to fly in military aircraft, you are required to obtain a physical examination from your personal physician at your expense. Please fill out the medical questionnaire and have your physician fill out the physical examination section of this form. You must then present this completed form to a Navy Flight Surgeon for endorsement for training and flight.

YES	NO	Medical Questionnaire - Do you have or have you ever had:
☐	☐	1. Disease of the eyes, ears, sinuses, seasonal allergies, hayfever, difficulty with clearing your ears, or pain in your ears or sinuses from diving or flying?
☐	☐	2. Chest pain, angina, heart attack, heart disease, heart murmur, p[illegible]tions, cardiac catherizations, or pacemaker?
☐	☐	3. Hypertension, stroke, blood clots in legs, swelling i[illegible]et, or e[illegible]tigue with mild exertion?
☐	☐	4. Asthma, wheezing, emphysema, chronic c[illegible], t[illegible]llapsed lung, or shortness of breath with mild exertion?
☐	☐	5. Disease of the bowel, ulcers, [illegible]g, c[illegible]nic abdominal pain, hernia, kidney stone, or painful or frequent urination?
☐	☐	6. Arthritis, jo[illegible]orm[illegible]c[illegible]k pain, or limitation of use of your back or extremities?
☐	☐	7. Paralysis, [illegible]uscles, seizures, epilepsy, migraine or other severe headaches, loss of consciousness, o[illegible]nesia?
☐	☐	8. Mania, depression, schizophrenia, suicide attempt, alcoholism, panic attacks, fear of flying, fear of heights, fear of enclosed spaces?
☐	☐	9. Anemia, diabetes, cancers, arterial gas embolism, bends, surgery, hospitalization, or other chronic medical conditions not listed?
☐	☐	10. Are you currently pregnant?
☐	☐	11. Are you currently taking any medication? List:
☐	☐	12. Can you jog 15 minutes continuously and swim 100 yards?

Applicant's Name _____ Age _____ Sex _____

Address _____ Phone _____

Signature _____ Date _____

OPNAV 3710/18 (3-95) 0107-LF-019-4600

Figure 8-5. Clearance for Nonmilitary/Nonaircrew Personnel To Fly in USN/USMC Aircraft (Sheet 1 of 2)

approved by CNO (N889) and listed in Appendix E, Figure E-3. NAVAEROPMEDINST shall, in coordination with BUMED, evaluate and standardize an approved curriculum, procedures, equipment, and devices. The NAPTP model manager is also responsible for the development/ distribution/duplication of training support materials for the NAPTP curricula and the adjunctive training subjects. The NAPTP model manager shall conduct evaluations as directed by N889 of all CNO-approved NAPTP training sites listed in Appendix E, Figure E-3.

8.4.3.4 Training Requirements. All flight personnel, and those individuals listed in Appendix E, shall successfully complete the CNO-approved course of instruction indicated in Appendix E, Figure E-1. The training shall be accomplished as follows:

a. Initially, prior to flight in any naval aircraft.

b. Refresher syllabus in accordance with paragraphs 8.4.2.1, 8.4.3.5, and Appendix E.

c. Joint training recognition — All elements of NAPTP and United States Air Force (USAF) physiology training shall be recognized as meeting either service's requirements except for aircraft/service specific training, such as ejection seat and ALSS training.

8.4.3.5 Approved Curricula (NAPTP)

a. Initial Physiology Training (NP) — See paragraph 1.3 of this instruction for a definition of terms used to determine appropriate NAPTP course of instruction.

Note

Initial physiology courses are not to be substituted for one another. When additional training is received (e.g., ejection seat training), NP1 or NP2 is the prerequisite and is used for the determination of the 4-year training interval.

(1) NP1. Required for all prospective active-duty USN and USMC aeronautically designated personnel. The training is conducted *only* in Pensacola, Florida.

(2) NP2. Required for all prospective military/ civilian aeronautically designated personnel, special mission personnel, or other individuals on flight orders trained outside Pensacola, FL, including USMC helicopter aerial gunners/observers and enlisted noncrewmembers on flight orders. Civilian contractor flight operations are governed by NAVAIRINST 3710.1.

(3) NP3. Required for all selected passengers. NP3 training is good for 36 months in the same category aircraft but may be required more frequently if specified by the flight-approving authority.

(4) NP4. Required for all project specialists. NP4 training is good for 36 months in the same category aircraft, but may be required more frequently if specified by the flight-approving authority. The training may be accomplished at any location by a PQS-qualified aerospace physiologist.

(5) NP5. Centrifuge-Based Flight Environment Training (CFET).

(a) All tactical jet aircrew flying aircraft listed in Appendix E, Figure E-1, shall receive, as a minimum, initial CFET appropriate to their fleet aircraft prior to FRS training. Tactical jet aircrews who have not received centrifuge/ dynamic training shall receive CFET as soon as operationally practical.

(b) Optional CFET shall be made available upon request by tactical jet aircrew.

(c) Waivers for initial CFET shall be granted by appropriate type commander when necessary.

(6) NP6. Required for all special operations personnel requiring high-altitude parachute (HAP) training. NP6 training qualification is good for 36 months. This training meets USAF HAP training requirements.

(7) NP7. Required for all midshipmen who are going to fly in naval aircraft. NP7 training is specific for the type of aircraft being flown. The training is good for one flying indoctrination period of time, not to exceed 90 days.

(8) NP8. Required for all VIPs (nonaviators). NP8 training is specific for the type of aircraft being flown. The training is good for only one flight but can be extended by the flight-approving authority.

8.4.4 Naval Aviation Water Survival Training Program

8.4.4.1 Water Survival Training. NAWSTP shall prepare prospective and aeronautically designated personnel, selected passengers, project specialists, and other authorized personnel for survival in the water. This is accomplished through lectures, demonstrations, practical experience in CNO-approved water survival procedures and techniques, and hands-on training using ALSS and survival procedures.

8.4.4.2 Coordination. CNET shall coordinate the training requirements of CMC, TYCOMs, CNATRA, and COMNAVAIRESFOR. Curricula shall be developed by the model manager of NAWSTP based on the needs of naval commands noted above and employing the technical advice of BUMED and other activities as necessary. NAWSTP curricula will be submitted to CNO (N889) via CNET and BUMED for approval and then provided to designated NAWSTP sites for implementation. NAVAEROPMEDINST, the naval aviation water survival (NAWS) model manager, shall develop, evaluate, and standardize NAWSTP procedures for approval by CNO (N889). The NAWS model manager shall conduct evaluations, as directed by N889, of all CNO-approved training sites listed in Appendix E, Figure E-4.

8.4.4.3 Definitions. The following terms defined in paragraph 1.3 are used in determining appropriate courses of NAWSTP instruction — aircrew, DIFCREW (USN), DIFTEM (USN), special mission personnel, enlisted crewmember (USMC), enlisted noncrewmember on flight orders (USMC), civilian aircrew, selected passengers, frequent flyers, and project specialists.

8.4.4.4 Graded Elements. Elements of training identified by an asterisk (*) in Appendix E, Figure E-5, are considered graded and must be satisfactorily demonstrated in accordance with standards established in CNO-approved curricula. Other elements of training are not to be graded in refresher training and will be for experience only, but they must be completed.

8.4.4.5 Training Requirements. NAWSTP includes initial and refresher curricula. For initial students, NAPTP requirements shall be completed prior to NAWSTP training (except for N1), and all survival swimming requirements shall be completed prior to device training.

a. Initial and refresher training (except N4) shall be completed at a CNO-approved site listed in Appendix E, Figure E-4.

(1) Aircrew, selected passengers, and project specialists shall successfully complete the CNO-approved course of instruction in Appendix E, Figure E-5.

(2) Appendix E, Figure E-6, lists appropriate courses for various categories of aircraft.

b. Initial Training — NAWSTP initial training is required for all prospective aeronautically designated personnel (officer or enlisted) prior to flight in any naval aircraft. Initial training (Course D-050-1500, Aviation Enlisted Aircrew Training School) is mandatory for all USN-enlisted aircrew or prospective aircrew on DIFCREW/DIFTEM orders and all USMC-enlisted crewmembers excluding those identified in paragraph 8.4.4.6a(5).

c. Refresher Training — NAWSTP refresher training is to be a learning experience. Proper demonstration of graded elements for certain training items is required (see paragraph 8.4.4.4).

d. Additional Training — Frequent flyer and other authorized personnel (Marine Recon, USN/USMC special operations, etc.) may be given additional device training when requested in writing by parent command.

8.4.4.6 Approved Curricula

a. Initial Training

(1) N1. Required for all prospective active-duty USN, USMC, and USAF aircrew (aeronautically designated personnel), excluding those identified in paragraph 8.4.4.6a(5). N1 training is conducted only at NAS Pensacola. Modules (Figure E-5) B, C, D, E, F, M1, and M2 are prerequisites for initial (N1) device training.

(2) N2. Preparatory course for international students that teaches basic survival swimming skills and enables students to enter the NAWSTP N1 curriculum at the beginning of device training.

(3) N3. Required for selected passengers and for all midshipmen who are going to fly in naval aircraft. N3 training is good for 36 months in same category aircraft but may be required more frequently if specified by the flight-approving authority.

(4) N4. Required for project specialists and good for 36 months in the same category aircraft.

b. Refresher Training — Personnel participating in NAWSTP curricula shall be graded as follows:

(1) Qualified (Q). Successfully completed all aspects of required training.

(2) Conditionally Qualified (CQ). Given to refresher students who fail to successfully complete one of the refresher training requirements in Appendix E, Figure E-5, and N5 students prior to device training. Personnel given a grade of CQ may continue on flight status (except initial students) but must requalify only in the training requirement or graded element not successfully completed. Failure to achieve a grade of Qualified in the CQ area within 90 days will result in a grade of Unqualified and will require completion of the entire curriculum. Remediation may take place at any CNO-approved NAWSTP site capable of completing the deficient training item. Upon successful completion of training, the NAWSTP site providing remediation shall then upgrade the student status to Q.

(3) Unqualified (U). Personnel in this status shall be grounded until they successfully achieve a grade of Q or CQ. Individuals who fail to successfully complete two or more of the items or graded elements in Figure E-4, or fail the final examination, shall receive an Unqualified. Deficient areas shall be completed within 90 days. After 90 days, the individual shall repeat the entire curriculum.

(4) Reserve personnel, operating under the control of COMNAVAIRESFOR, may receive a Q for R1, R2, and R3 without receiving device training by those reserve sites specified in Appendix E. If NAWSTP refresher training is completed at an active-duty site where training devices are available, they shall be used as appropriate. All aircrew using the NAWSTP refresher curriculum as initial training to transition to a new aircraft shall receive device training.

Note

Active-duty U.S. Navy personnel on flight orders shall receive device training.

c. Weather/Equipment Delays — Personnel participating in initial training (N1 and N6 only) who are unable to complete a particular training evolution because of equipment malfunctions or inclement weather may receive an overall grade of Qualified if they complete approved alternate training. Personnel participating in refresher training who miss a particular training evolution for this reason may receive a grade of Qualified if they successfully complete all other areas. Missed training elements shall be annotated as incomplete in individual training jackets.

8.4.4.8 Environmental Exposure. Flight personnel shall not participate in flight duties for 12 hours after completion of the following NAWSTP device training: 9H21 (MOD N2), 9H19 (MOD 0), 9E8 (MOD P), or 9D5 (MOD N1). During this 12 hours, they may fly as passengers.

8.4.5 Search and Rescue Pilot/Rescue Swimmer Training

a. The purpose of this program is to promote standardization of SAR procedures and to establish a minimum SAR training program for personnel assigned search and rescue duties aboard aircraft. Units involved are those that are established primarily to fulfill search and rescue mission responsibilities or that may be assigned search and rescue responsibilities in conjunction with other mission areas. The search and rescue model manager (SARMM), Helicopter Antisubmarine Squadron One (HELANTISUBRON ONE/HS-1), establishes SAR procedures and ensures standardization. Type commanders shall designate SAR evaluation units within their command to train, evaluate, and assist individual units/commands in developing and implementing search and rescue programs.

b. Requirements for training, proficiency, and requalifications for the SAR pilot and the rescue swimmer are presented in OPNAVINST 3130.6 and shall be considered minimum standards. Commands are encouraged to supplement those listed requirements with additional training pertinent to local mission requirements.

c. The rescue swimmer school training program (RSSTP) shall prepare designated aircrew and selected aircrew candidates for SAR swimmer duties. This is accomplished through lectures, demonstration, practical experience in CNO-approved rescue procedures/techniques and hands-on training using aviation life support and rescue equipment.

d. The NAVAVSCOLSCOM is designated the Rescue Swimmer School Model Manager (RSSMM). The RSSMM establishes RSSTP procedures for approval

Note

Physical examinations that have been conducted but are not completed because of additional consultation or administrative reasons shall be considered to have met the requirements for annual certification, unless the individual is found to be not physically qualified during the examination, or the determination of physically qualified must be held in abeyance awaiting consultation. A clearance notice shall be issued in support of satisfying the requirements.

8.5.2.2 Check-In. Upon reporting (including TAD for flying only) to a new unit or base.

8.5.2.3 Postgrounding. Following grounding for medical reasons.

8.5.2.4 Posthospitalization. Following return to duty after any admission to the sick list or hospital (including medical boards). A grounding notice (BUMED 6410/1) shall be issued for all admissions and a clearance notice (BUMED 6410/2) shall be issued when aircrew personnel are returned to flight duties.

8.5.2.5 Postmishap. As necessary to meet the requirements of OPNAVINST 3750.6.

8.5.2.6 As Directed by Higher Authority. When required of competence for duty, followup for waivers, etc.

8.5.3 Scope of Examinations. The extent of these examinations shall be determined by the flight surgeon, as directed by MANMED or OPNAVINST 3750.6. Notation of such examinations shall be entered in the individual's health record and reported to the commanding officer and, as required, via NAVAEROPMEDINST (Code 42) to BUPERS/CMC.

Note

All Class I aviation personnel will receive a manifest refraction to best visual acuity (BVA) at the time of their annual flight physical. In the case where spectacles are worn, if the current spectacles do not correct to 20/20 or better in both eyes, the aviator is grounded until a current prescription can be obtained. In the case where spectacles had not previously been required, the aviator is grounded until spectacles are obtained to correct the visual acuity to 20/20 or better in both eyes.

8.5.4 Disposition of Aircrew Found Not Physically Qualified (NPQ)

8.5.4.1 Physical Standards. Aircrew personnel are expected to maintain appropriate physical standards at all times. However, medical conditions may preclude such physical qualifications for short or long periods. When aircrew personnel are unable to meet required physical standards for periods exceeding 60 days, an aviation physical examination shall be completed. Typed Standard Form 88 (SF 88) with appropriate consultations and flight surgeon recommendations shall be forwarded to NAVAEROPMEDINST (Code 42). NAVAEROPMEDINST (Code 42) shall review and make a recommendation to BUPERS or CMC as appropriate.

Note

Personnel not physically qualified for flight will normally continue to receive aviation career incentive pay (ACIP) for up to 180 days from the date of incapacitation. Final determination on ACIP eligibility resides with BUPERS/CMC and the PAYPERSMAN.

8.5.4.2 Waiver of Physical Standards. Aircrew personnel who do not meet physical standards may be considered for a waiver of such standards. Such a waiver may be granted on the need of the service, consistent with training, experience, performance, and proven safety of the aircrew personnel. In such cases, the following procedures shall be followed:

a. The air crewman's commanding officer shall submit a request for waiver of physical standards with recommendations as to the operational advisability of the waiver request, including limitations as to aircraft type, in-flight duties, etc. Included in this waiver request shall be an appropriate aeromedical evaluation by the supporting medical treatment facility. The evaluation shall be presented on a typed SF 88, with appropriate consultations. A flight surgeon shall include medical recommendations as outlined in the MANMED. The waiver request shall be forwarded via the appropriate chain of command and NAVAEROPMEDINST (Code 42) to BUPERS, or CMC (ASM), as appropriate.

b. NAVAEROPMEDINST (Code 42) shall review the medical evaluation and forward a recommendation to BUPERS, or CMC (ASM), as appropriate.

c. BUPERS, or CMC (ASM), as appropriate, shall review the request and recommendations and take appropriate action. In general, one of the following dispositions shall be made:

CHAPTER 9

Miscellaneous

9.1 PARACHUTE JUMPS

9.1.1 General. Practice parachute jumps other than those required in the necessary and normal course of training or experimentation shall not be made unless expressly authorized by CNO. Authority to conduct parachute jumps required by training syllabuses or experimental projects is delegated to the commands assigned cognizance of the training or the experimental project.

9.1.2 Delayed Release Jumps. Delayed release parachute jumps shall not be made except as authorized by CNO. Any jump where no attempt is made to open the parachute immediately upon clearing the aircraft is considered a delayed release jump. Authority to conduct delayed release parachute jumps for test or evaluation is hereby delegated to commands assigned cognizance of test or experimental projects.

9.1.3 Jump Precautions. When authorized parachute jumps are to be made in the vicinity of bodies of water, personnel making the jumps shall wear life preservers. Adequate provisions for rescue of the jumper should be made beforehand.

9.1.4 Federal Aviation Regulations. FAR, Part 105, details information that must be provided the FAA and delineates strict communication requirements that must be complied with prior to and during parachute operations. Aircraft commanders shall be thoroughly familiar with the procedures prior to conducting parachute operations from naval aircraft.

9.1.5 Demonstrations. Paragraph 3.3 provides information on flight demonstrations.

9.2 SECURITY OF AIRCRAFT AWAY FROM BASE

9.2.1 General. When it is necessary to leave an aircraft on a field, airport, beach, body of water, or other area where military or naval personnel cannot take custody of the aircraft, the pilot in command shall take proper measures to ensure the safety of the aircraft and any classified equipment. When naval aircraft operating in company have landed away from home base, the senior naval aviator/naval flight officer shall be responsible for all of the aircraft as if a detached unit operation were being conducted under his/her cognizance.

9.2.2 Aircraft Mishap. In case of mishap to an aircraft, the pilot in command is responsible for its safe custody until the aircraft has been taken into custody by proper authority in accordance with the provisions of OPNAVINST 3750.6.

9.3 AIRCRAFT NOISE ABATEMENT

Aircraft noise creates a major public relations problem. All commands shall review their operating practices on a continuing basis with a view toward minimizing this nuisance to the public. CNO (N889F) should be informed of complaints that are considered serious by the judgment officer.

9.4 CLAIMS FOR PERSONAL PROPERTY IN MARITIME DISASTERS OF AIRCRAFT

a. During aircraft operations over open water, a forced landing is an ever present possibility. The probability of damage to the personal property aboard any aircraft exists. The condition is known to all personnel.

b. In view of the existing hazard to personal property in such operations, it is incumbent upon the personnel so engaged to use good judgment regarding the articles of personal property that are carried on such flights. They shall not needlessly jeopardize personal property that does not serve the personnel in the performance of the military missions of the aircraft in which they are embarked. When aircraft are in the execution of transfer flights from shore station to embarkation on ships and vice versa and in other similar cases, the transportation in the aircraft of articles of clothing not specifically required in the flight operation is considered to be justifiable.

CHAPTER 10

Flight Records, Reports, and Forms

10.1 NAVAL FLIGHT RECORD SUBSYSTEM

The NAVFLIRS serves as a single, integrated source of flight data for the aviation maintenance and material management (AV-3M) system, the Marine Corps flight readiness evaluation data system (FREDS), the individual flight activity reporting system (IFARS), the Navy logistics information system (NALIS), and up-line reporting to all other existing systems.

10.2 AIRCRAFT INSPECTION AND ACCEPTANCE (AIA) RECORD, OPNAV 4790/141

The AIA Record, OPNAV 4790/141 (Figure 10-1), provides for:

a. Pilot acceptance of the aircraft in its present condition.

b. Identifies aircraft by bureau number (BuNo), type/model/series (T/M/S), and reporting custodian.

c. Certification of aircraft readiness for flight by maintenance personnel and a record of fuel, oil, oxygen, and expendable ordnance on board.

d. The AIA record shall remain at the place of first takeoff. If the aircraft is away from home and qualified maintenance personnel are not available, the pilot in command shall sign the AIA record in the safe for flight certification block. The form will be maintained by the transient/host activity until safe completion of the flight.

10.2.1 Pilot in Command

a. The pilot in command shall review a record of aircraft discrepancies and corrective actions for the 10 previous flights.

b. The pilot in command shall sign the AIA record, assuming full responsibility for the safe operation of the aircraft and the safety of the other individuals aboard.

10.2.2 "Limitations/Remarks" Section. This section informs the pilot of uncorrected discrepancies or unique characteristics of this particular aircraft. Local instructions will always govern the specific content of this space.

10.3 NAVAL AIRCRAFT FLIGHT RECORD, OPNAV 3710/4

The NAVFLIRS, OPNAV 3710/4 (Figure 10-2), provides a standardized Department of the Navy flight activity data collection system. NAVFLIRS is the single-source document for recording flight data and is applicable in specific areas to aircraft simulators. The form shall be prepared for each attempt at flight of naval aircraft or training evolution for simulators. The authorized document formats are the preprinted multicopy form, S/N 0107-LF-037-1020, and the computer- generated form from the CANDE or Naval Aviation Logistics Command Management Information System (NALCOMIS) Organizational Maintenance Activity (OMA) program.

a. The naval aircraft flight record is a single-source document that collects flight activity data in support of the maintenance data system (MDS), FREDS, IFARS, and NALIS. Types of data collected are as follows:

(1) A statistical description of the flight pertaining to the aircraft and crewmembers

(2) A record of all logistic actions performed during the flight

(3) A record of weapons proficiency

(4) A record of training areas utilized and other miscellaneous data.

b. The naval aircraft flight record consists of an original and two color-coded copies of no carbon required (NCR) paper. All copies contain identical

information. Copy one is used for data entry and then is filed in Operations. Copy two will be in the suspense file copy until copy one is returned to Operations. Copy three is retained in the Maintenance Department.

Note

For activities using the CANDE or NALCOMIS OMA program, personnel shall print two hard copies of the generated NAVFLIRS form for local activity use. The NAVFLIRS data diskette is forwarded to the supporting DSF for processing. Hard copy one is filed in Operations for retention in the master flight files. Hard copy two is retained in the Maintenance Department for 3 months to facilitate local data-base correction.

c. After all applicable entries to maintenance/operation records and logs are made, copy one shall be retained for the master flight files discussed in paragraph 10.4. Copy two, after processing, will be retained until monthly reports are verified. Copy three shall be retained by Maintenance Control for 3 months to facilitate local data-base correction.

10.3.1 Documentation of the Naval Aircraft Flight Record

a. The shaded portions of the naval aircraft flight record are mandatory fields and shall be filled out for every attempt at flight/simulator training where applicable. Although not shaded on the form, blocks 11 and 12 of the aircrew data section and block 11 of the logistics data section are mandatory fields.

b. The pilot or other designated crewmember shall maintain an accurate record of the flight. At the completion of the flight/simulator event, the pilot or mission commander shall sign the naval aircraft flight record, certifying it complete and correct. When reporting simulator usage, forward the naval aircraft flight record to the Operations Department of the crewmember's parent command.

c. In instances where the aircraft and crewmember are assigned to different activities and supported by different DSFs, the crewmember shall provide his/her parent activity with a duplicate copy of the naval aircraft flight record for submission to the supporting DSF (i.e., when the aircraft is assigned to a squadron at NAS Oceana and the crewmember is attached to a squadron at NAS Alameda, the crewmember shall obtain a duplicate copy of the naval aircraft flight record and deliver the flight record to his/her squadron at NAS Alameda for submission). That procedure is necessary to update his/her monthly individual flight activity report (NAVFLIRS-3) and fiscal year-to-date (FYTD) summary. Submission of the duplicate naval aircraft flight record (with same document number) at the DSF that is not the same DSF supporting the aircraft reporting custodian shall be batched with a 4 in the AWAY FROM HOME block on the accompanying document control form (DCF). The DCF will be completed and submitted in accordance with OPNAVINST 4790.2. However, aviators from different squadrons at NAS Oceana functioning as crewmembers in the same aircraft need not submit duplicate naval aircraft flight records; only the aircraft reporting custodian will submit the record. Since both squadrons are supported by the same DSF, the daily audit reports for both squadrons will display this flight with crewmember information. For submission of flight records out of the reporting period, an away code of Z shall be entered on the DCF to indicate late data and shall be completed and submitted in accordance with OPNAVINST 4790.2.

d. The Operations Department is responsible for verifying the accuracy and completeness of naval aircraft flight records submitted for data processing, ensuring submission of aircrew gain and loss reports, verifying the daily audit reports, and coordinating the correction of errors with the maintenance analyst.

e. The maintenance analyst is the NAVFLIRS coordinator and is responsible for accomplishing the daily submission of completed naval aircraft flight records for processing, distributing daily audit and monthly reports to the Operations and Maintenance Departments, and coordination of error corrections with operations and maintenance control.

Note

For Marine Corps activities, the operations NCOIC will perform those functions.

f. One naval aircraft flight record may be used for two or more flights under the following conditions:

(1) The total mission requirement (TMR) codes do not exceed three and the pilot in command remains the same. TMRs are contained in Appendix D.

and maintenance and operation personnel who enter or manipulate data derived from this form are familiar with the proper use of appropriate codes. It should be noted that although the NAVFLIRS form allows for only three training codes, CANDE/ NALCOMIS OMA will provide for up to 10 training codes on one automated NAVFLIR.

m. The documentation for a routine flight consists of information from the following sections on the naval aircraft flight record:

(1) Aircraft data — RECTYP 7B.

(2) Aircrew data — RECTYP 7C.

(3) Logistics depart data — RECTYP 7E.

(4) Logistics arrive data — RECTYP 7F.

Note

Logistics arrive data, RECTYP 7F, is not completed in the submission of a cancellation. Weapon proficiency data, RECTYP 7G, is not mandatory for every flight but should be completed as applicable to document time spent in restricted air space, miscellaneous data, etc. Refer to paragraphs 10.3.2 through 10.3.5 for information required to complete the naval aircraft flight record for a routine flight. Refer to paragraph 10.3.6 for information required for personnel data, RECTYP 7D transactions.

10.3.1.1 Logging Simulator Time. Simulator events conducted in Navy simulators (or non-Navy simulators if used for the purpose of logging Navy/Marine aircrew flight time) shall be documented on a naval aircraft flight record and processed by the user's squadron/ activity. The following data fields, as described in paragraphs 10.3.2 through 10.3.5, are required:

a. AIRCRAFT DATA SECTION

(1) BUREAU/SERIAL NO. (BUNO/SER) — If assigned to device.

(2) TYPE EQUIPMENT CODE (TEC) — See Appendix K.

(3) ORGANIZATION CODE (ORG) — Use code "ZEZ" for simulators.

(4) MISSION 1 (MSN1).

(5) HOURS 1 (HRS1).

(6) SUPPORT CODE (SUPTCD) — Use appropriate code for user's activity. See Appendix I.

b. AIRCREW DATA SECTION

(1) EXCEPTION CODE — Enter the "T" exception code for simulators.

(2) NAME (FSTINT and LSTINT).

(3) SOCIAL SECURITY NUMBER (SSN).

(4) SPECIAL QUALIFICATIONS (SPQUAL).

(5) SERVICE CODE (SVC).

(6) FLIGHT TIME (FPT, CPT, or SCT).

(7) SIMULATED INSTRUMENT TIME (SIM).

(8) LANDINGS (TLNG1/2/3/4 AND NLNDG1/2/3/4) — Optional when documenting simulator flights.

(9) APPROACHES (TAPP1/2/3/4 and NAPP1/2/3/4) — Simulated only.

(10) TRAINING CODES (TRACD1/2/3) — In accordance with T&R manual.

c. LOGISTICS DATA SECTION

(1) TIME ZONE (TMZONE).

(2) TIME DEPART/ARRIVE (TIMDEP-TIMARR) — Enter the start and stop time of the event.

(3) DATE DEPART/ARRIVE (DTEDEP-DTEARR) — Enter the four-character Julian date (YDDD) for departure and arrival date of the event.

(4) ICAO DEPART/ARRIVE (ICAODP-ICAOAR) — Enter the appropriate ICAO codes (depart and arrive) for the simulator location.

d. REMARKS — If simulator is non-Navy, enter type aircraft simulated.

e. SIGNATURE — Of crewmember receiving training.

i. Block 33. HOURS 2 (HRS2): Enter the hours and tenths dedicated to performance of MSN2.

j. Block 36. MISSION 3 (MSN3): Enter the mission code from Appendix D that most accurately describes the tertiary mission if applicable. The mission may not necessarily be assigned at takeoff.

k. Block 39. HOURS 3 (HRS3): Enter the hours and tenths dedicated to performance of MSN3.

Note

The sum of the hours in HRS1, HRS2, and HRS3 represent total aircraft flight time.

l. Block 42. SUPPORT CODE (SUPTCD): Enter the two-character support code from Appendix I that identifies the claimancy providing funding for mission accomplishment. The code will be used by CNO (N880) to monitor special interest missions, operations, or exercises. For crewmembers within the personnel exchange program (PEP), insert "NS" in the field.

m. Block 44. TOTAL FLIGHTS (TOTFLT): Enter the total number of flights.

n. Block 46. OPERATIONS (OPS): Use one of the following codes, whichever is the most applicable to the operational scenario:

(1) A — Ship Operations (Nondeployed) — For flights primarily involving carrier/ship operations ashore for a nondeployed unit.

(2) 1 — Land Operations (Nondeployed) — For flights primarily involving operations ashore for a nondeployed unit.

(3) B — Ship Operations (Deployed) — For flights primarily involving carrier/ship operations while unit is deployed.

(4) 2 — Land Operations (Deployed) — For flights primarily involving operations ashore for a deployed unit.

(5) C — Fleet Replacement Squadron Overhead (Ship) — For FRS flights involving carrier/ship operations primarily not for the purpose of training students.

(6) 3 — Fleet Replacement Squadron Overhead (Land) — For FRS flights ashore primarily not for the purpose of training students.

Note

For the purpose of this instruction, deployed time shall be defined as all time accumulated when units are under operational control of Commander Sixth Fleet (COMSIXTHFLT), Commander Seventh Fleet (COMSEVENTHFLT), and/or Commander Task Force (CTF) 67, 84, 12, or 72 only.

o. Block 47. CATAPULT LAUNCH/JET ASSISTED TAKEOFF (CJ):

(1) Catapult Launch: Enter the number of catapult launches (ship based or shore based).

(2) JATO Launch: Enter the total number of JATO launches executed during the flight.

p. Block 49. AIRLIFT MISSION NO. (MISNUM): If applicable, enter the nine-character flight mission number from the flight advisory or number assigned by the scheduling authority. Refer to OPNAVINST 4631.2. MISNUMs may be used by any activity if structured as follows:

(1) Positions 1 to 3 — ORG.

(2) Positions 4 to 7 — Julian date.

(3) Positions 8 and 9 — 01-99 (sequentially assigned).

Note

MISNUM must be filled in to ensure proper organization of data on the monthly aircraft logistics data report (NAVFLIRS-4). If no cargo or passengers are transported during the accounting period, the NAVFLIRS-4 will only indicate flight hours by leg number for each BuNo.

q. ENGINE HRS: Enter the hours and tenths for each engine if different than the total flight hours. The data are for maintenance control and are not processed at the DSF.

m. Blocks 42 to 49. LANDINGS (TLNDG1/2/3/4 and NLNDG1/2/3/4): Enter the type and number of landings accomplished. If a type of landing was accomplished more than nine times, log the type in block 42 and the number in blocks 43 and 44 (see Appendix F). Only the pilot or student pilot actually controlling the aircraft during the landing and documenting FPT shall log and be credited with the landing. Landings are not required when documenting simulator flights.

Note

NFOs and student NFOs shall report day and night carrier landings only. To indicate those landings, Y will be entered in block 42 for day landings and Z for night landings and the number in blocks 43 and 44. If both day and night landings are recorded on the same flight, utilize blocks 45 and 46 for night landings.

n. Blocks 51 to 57. APPROACHES (TAPP1/2/3/4 and NAPP1/2/3/4): Enter the type and number of approaches performed beginning with block 51 (see Appendix F). If the number of a particular approach credited to an individual exceeds nine, record the overflow in the next type and number set.

Note

- Only the pilot exercising principal active control during the approach may be credited with that approach. However, when flying in actual instrument conditions, the instructor of a student pilot (a designated aviator is not considered a student pilot) shall also receive credit for an actual instrument approach. Actual and simulated instrument conditions are defined in Chapter 1.

- Only that portion of the approach executed to a missed approach or landing shall be logged as an approach (i.e., a tacan approach to a PAR/ILS/ALS final would be logged only as a precision approach).

- Precision approaches are as follows:

  (1) ALS — Automatic landing system (includes SPN-10, SPN-42, etc., mode I or IA).

  (2) ILS — Instrument landing system (includes SPN-10, SPN-42, etc., mode II).

  (3) PAR — Precision approach radar (includes SPN-10, SPN-42, etc., mode III).

- Nonprecision approaches are as follows:

  (1) VOR-VHF OMNI range

  (2) VOR/DME-VOR/distance measuring equipment

  (3) Tacan-UHF tactical air navigation aid

  (4) NDB (ADF) nondirectional beacon (automatic direction finder)

  (5) L/MF range

  (6) Localizer

  (7) ASR — Airport surveillance radar (includes carrier-controlled approach (CCA) when no glidepath information is provided).

- Helicopters conducting coupled approaches after official sunset or during actual instrument conditions in automatic or alternate modes shall use a 3. Simulated instrument conditions in automatic or alternate modes shall use a C. Coupled approaches will not be used to fulfill approach requirements for instrument rating purposes.

o. Blocks 59 to 65. TRAINING CODES (TRACD1/2/3): Enter the appropriate training codes in accordance with local instructions.

Note

- Training codes enable recording of individual aviation training accomplished on each flight or simulator event. These codes are standardized and represent flight training from entry level to fully combat qualified, including syllabus maintenance. For Navy tactical and ASW aviators, training codes are assigned by the TYCOM joint training and readiness instruction, Squadron Training and Readiness Manuals (CNAP/CNAL 3500.67/63 series), and are used to monitor the achievement of readiness qualifications in aircraft or simulators.

F084 for FF 1084 (USS McCandless)). When no ICAO code is available, enter ZZZZ.

(6) Block 24. SYSTEM STATUS (SS): Enter the appropriate SS code for the readiness condition of the aircraft upon landing (see Appendix G).

(7) Block 25. DISTANCE (DIST): Enter the distance, in nautical miles, flown on each leg. It may be left blank if the flight begins and ends at the same location.

(8) Blocks 29 and 33. 1ST/2ND DELAY CODES (DPDCD1/2): Not used.

(9) Blocks 30 and 34. 1ST/2ND DELAY HOURS (DPDHR1/2): Not used.

(10) Blocks 37, 40, 43, 46, and 49. CONFIRMED PAYLOAD, PRIORITY 1-5, PASSENGER NUMBER (PRI1/2/3/4/5): Enter the number of passengers in each category for each leg of the flight (if none, leave blank) (see Appendix G).

(11) Block 52. CONFIRMED PAYLOAD, CARGO IN POUNDS (CPCRGO): Enter the pounds of confirmed cargo for each leg of the flight (if none, leave blank).

(12) Block 57. OPPORTUNE PASSENGER NUMBER (OPPAX): Enter the number of unscheduled passengers (including space A) for each leg of the flight (if none, leave blank).

(13) Block 60. OPPORTUNE CARGO (OPCRGO): Enter the pounds of unscheduled cargo for each leg of the flight (if none, leave blank).

(14) Blocks 65 and 66. OPPORTUNE CARGO CODES 1/2 (OPCCD1/2): Enter the first and second most significant types of opportune cargo for each leg of the flight (if none, leave blank) (see Appendix G).

(15) Block 67. CONFIGURATION DATA, MAXIMUM PASSENGERS (MAXPAX): Enter the maximum number of seats available for each leg of the flight (if none, leave blank).

(16) Block 70. CONFIGURATION DATA, MAXIMUM CARGO (MAXCGO): Enter the maximum cargo-carrying capability in pounds for each leg of the flight (if none, leave blank).

10.3.5 Weapons Proficiency Data Section

a. The weapons proficiency data section collects training area, weapons delivery, and miscellaneous data. The training area data fields allow for documenting the usage of two areas per line. The training area data section captures the use of targets, restricted areas, warning areas, alert areas, military operating areas (MOAs), and ATCAA as outlined in the AP/1A area planning guide. The weapons delivery data fields allow for documenting three types of delivery per line; each delivery is differentiated by the type ordnance delivered. The miscellaneous data fields allow for two entries per line, enabling the user to document miscellaneous training and utilization that is of importance to the individual or the activity. Training area data entries are mandatory when special use airspace (restricted areas, controlled firing areas, warning areas, alert areas, and MOAs) and areas for special use (ATCAAs) or military training routes have been scheduled. The cancellation of special use airspace must be documented using the appropriate miscellaneous data codes (see Appendix H). The number of flight hours that were to be utilized within that airspace will be entered in miscellaneous data 1/2 block. Naval aviators and NFOs shall log image intensification device (night vision goggle) usage. Image intensification device usage shall be logged in the miscellaneous codes/data blocks.

b. Complete the data blocks in the weapons proficiency data section, RECTYP 7G, as applicable (Figure 10-6):

(1) Block 10. EXCEPTION CODE (EXCD): No exception codes are permitted for the initial entry. This block is used for corrections and deletions only.

(2) Block 11. LINE NUMBER (LINENR): Enter the line number from the aircrew data section corresponding to the crewmember whose activity is being described in the weapons proficiency data section. If more than two crewmembers are involved, attach additional naval aircraft flight records to page one, as described in paragraph 10.3.1, with only this section complete. All crewmembers documenting weapons proficiency must be entered on page one.

(3) Blocks 12 and 21. TRAINING AREA 1/2 (TNGAR1/2): Enter applicable training area codes. Training area codes may range from two to seven characters. The code must be entered

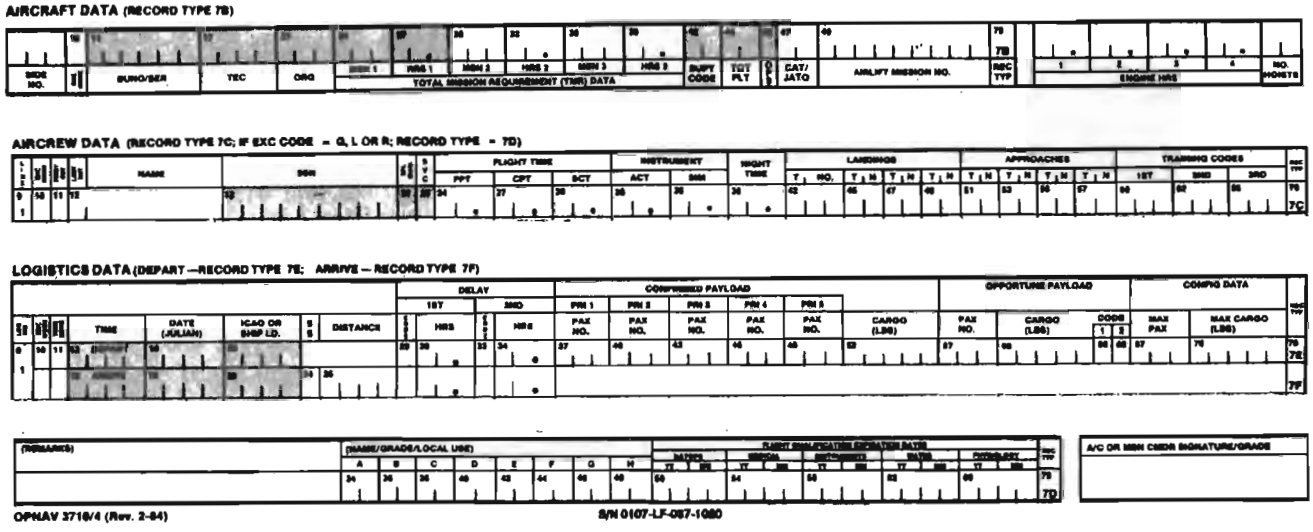


Figure 10-7. Personnel Data Section

(5) AIRCREW DATA SECTION, Block 12, LAST INITIAL (LSTINT): Enter the first letter of the last name.

Note

The name element following the last initial is not entered (keypunched) and should be left blank.

(6) AIRCREW DATA SECTION, Block 13, SOCIAL SECURITY NUMBER (SSN): Enter the social security number of the crewmember; allow no dashes.

(7) AIRCREW DATA SECTION, Block 23, SERVICE CODE (SVC): Enter the service code (see Appendix F).

(8) LOGISTICS DATA SECTION, Block 16, JULIAN DATE (DATE): Enter the Julian date of the transaction.

(9) LOGISTICS DATA SECTION, Block 29, AIRCREW STATUS CODE (ASC): This field is mandatory for the Marine Corps, optional for the Navy. Enter the appropriate ASC (see Appendix J).

(10) LOGISTICS DATA SECTION, Block 33, SYLLABUS STATUS CODE (SSC): This field is mandatory for the Marine Corps, optional for the Navy. Enter the appropriate SSC (see Appendix J).

(11) PERSONNEL DATA SECTION, Block 34, NAME/GRADE/LOCAL USE A-G: Enter the last name of the crewmember. If the last name exceeds 14 characters, print only the first 14.

(12) PERSONNEL DATA SECTION, Block 48, NAME/GRADE/LOCAL USE H: Enter the paygrade of the crewmember, omitting dashes (i.e., O3, W2, E6, etc.).

(13) PERSONNEL DATA SECTION, Block 50, FLIGHT QUALIFICATION EXPIRATION DATES, NATOPS, MEDICAL, INSTRUMENTS, WATER, PHYSIOLOGY (YYMM): Enter the last two characters of the calendar year and the month when crewmember qualifications EXPIRE (must be four characters).

Note

The aircraft or mission commander signature and grade attests to the validity and completeness of the naval aircraft flight record. No signature is required for the submission of RECTYP 7D transactions.

b. Privacy Act Statement for naval aircraft flight record:

(1) Title 5 U.S.C. 301, Departmental Regulations, and Executive Order 9397 authorize collection of this information.

(2) The primary use of this information is to consolidate the collection of flight data into a

SEP 86

ORG: AN2

NAME: MERRY INT: J SSN: 071582639 GRADE: O-5 SVC: 1

BUNO	TEC	DATE	TIME DEP	ICAO DEP	TIME ARRV	ICAO ARRV	EX CD	FLT TIMES FPT	CPT	SCT	INST ACT	SIM	NITE TIME	****LANDINGS**** 1ST T	2ND T N	3RD T N	4TH T N	**APPROACHES*** 1ST T N	2ND T N	3RD T N	4TH T N	A/C	W	SP	TRNG CODE 1ST	2ND	3RD
161111	ASBE	6249	0800	KNIC	1110	KNIC		3.2			1.1			5	3	6	2			1	1						
161111	ASBE	6251	1000	KNIC	1230	KNIC		2.5			1.0	.5		6	2												
161111	ASBE	6259	1830	KNIC	2230	KNIC		2.5	1.0		1.2		1.5	F	1					3	1						
161111	ASBE	6263	2000	KNIC	2400	KNIC		3.1	.9		2.4	.8	4.0	F	2					1	1						
161111	ASBE	6266	0900	KNIC	1115	KNIC		2.3			1.3			5	2	6	1										
						*		13.6	1.9		7.0	1.3	5.5														
161112	ASBE	6253	0830	KNIC	1200	NIKE		2.3	1.2		1.4			2	2	1	1			1	1						
161112	ASBE	6253	2145	NIKE	0145	KNIC		2.9	1.1		2.0	1.0	4.0	F	1								1				
161112	ASBE	6272	0730	KNIC	1310	KNIC		4.0	1.7		2.2	1.5		6	1												
						*		9.2	4.0		5.6	2.5	4.0														
SS4623	VSBD	6273	0900	KNIC	1100	KNIC	T	2.0				2.0		6	1					1	4						
						*		2.0				2.0															
					TOTAL AIRCRAFT TIME			23.8	5.9		12.6	3.8	9.5														

*****WEAPONS PROFICIENCY DATA***** TYPE DELIVERY	RUNS	SCORE
AIR-TO-AIR INFRARED	1	2100

*****MISCELLANEOUS DATA*****	
NIGHT VISION GOGGLES	1.0

*******FISCAL YEAR SUMMARY******* TEC	HRS	INST	NIGHT
ASBE	316.8	19.5	87.3
VSBD	10.5	10.5	
TOTAL	329.3	30.0	87.3

Figure 10-8. Monthly Individual Flight Activity Report (NAVFLIRS-3)

10.4.2 Specific Requirements

a. Only flights of aircraft of the aircraft reporting custodian shall be filed in the master files; however, all flights shall be accounted for and no flight shall be filed in more than one activity's master flight files.

b. Each detachment shall maintain separate master flight files for the period while deployed with CVWs or while otherwise remotely separated on detached duty from the parent activity.

c. Reporting custodians having aircraft of more than one controlling custodian may include all flights thereof in the activity's master flight files regardless of controlling custody (i.e., one DPRO may have COMNAVAIRSYSCOM FS, RDT & E, and STF aircraft and be a separate reporting custodian for each).

d. No master flight files need to be maintained for aircraft while in a bailment or loan status.

e. For aircraft being ferried, information concerning such flights shall be placed in the master flight files of the reporting custodian of the aircraft being ferried.

f. For new aircraft being accepted from contractors, reporting custodians (i.e., DPRO) shall include in their master flight files flights of new production aircraft before Navy acceptance only if a naval aviator was aboard in a pilot or crew status. All flights after Navy acceptance shall be filed.

10.4.3 Procedures for Maintaining Master Flight Files

10.4.3.1 File Contents. Master flight files shall consist of securely bound current naval aircraft flight record originals (refer to paragraph 10.3.1, subparagraph h). CANDE/NALCOMIS OMA-produced facsimiles are approved for official use in the master flight file once the pilot or mission commander signs the hard-copy printout.

10.4.3.2 Binders. Binders used for the master flight files are nonspecific except that they must provide a durable cover and backing and allow for the secure fastening of their contents. For example, naval aircraft flight records may be adequately filed in commonly used legal-size, vertical pressboard folders that allow for two stacks of forms.

Note

When records are less than 1 cubic foot in bulk, delivery may be deferred until the succeeding year when accumulation of both years will be forwarded.

10.5 AVIATORS FLIGHT LOG BOOK, OPNAV 3760/31

10.5.1 General Policies

10.5.1.1 Requirements. All naval aviators/student naval aviators and naval flight officers/student naval flight officers shall possess a currently maintained Aviators Flight Log Book, OPNAV 3760/31, as the primary individual flight activity record. Possession and maintenance of the log book is optional for other personnel on duty involving flying. The continued submission of flight data for all aeronautically designated naval officers is mandatory.

a. Each duly issued Aviators Flight Log Book is considered to be the personal property of the individual who currently is or in the past was required to possess it. Flight log books of missing or captured personnel shall be handled in accordance with instructions governing disposition of the service record.

(1) Ensure that entries are legible, complete, and accurate.

(2) Ensure compliance wherever provisions for use of the log book require entries by or signature of other personnel.

(3) Keep the book(s) in good physical condition, guard against its loss, remove no pages from it (blank or otherwise), and use it as long as its capacity permits before requisitioning a new book.

10.5.2 Entries. Recording of information on the flight record (Figure 10-14), the accident and flight rule violation record (Figure 10-16) and the mishap record (Figure 10-17) is mandatory. Also, documentation of completion of annual NATOPS and instrument evaluations shall be recorded on the qualifications and achievements record (Figure 10-9). Recording of information in all other sections of the Aviators Flight Log Book is optional. When entries are made in optional sections, they shall be in accordance with procedures set forth here.

10.5.2.1 Qualifications and Achievements

a. These pages (Figure 10-9) are to receive whatever entries are required or appropriate to record significant qualifications or achievements accredited the individual.

b. Make entries in chronological order.

c. Enter revocation of previously held qualifications showing the date of revocation and signature of the commanding officer or authorized deputy.

10.5.2.2 Personal Changes. Use of this section (Figure 10-10) is at the discretion of the individual.

10.5.2.3 Summary of Total Flight Record. Use this page (Figure 10-11) to record the total accumulated pilot time earned in each model of aircraft up to and no further than the date of opening the log book.

QUALIFICATIONS AND ACHIEVEMENTS

(e. g. instrument card, patrol plane commander, aircraft type, CarQual, etc.)
(To be signed by Commanding Officer or authorized deputy)

QUALIFICATION	DATE	SIGNATURE

Make entries on lines, or in rubber stamp impressions anywhere on the page

Figure 10-9. Qualifications and Achievements (OPNAV Form 3760/31)

FLIGHT RECORD SUMMARY, TOTAL AND FOR 12 MONTHS PRECEDING THIS LOG

(To be filled in from old log book when opening this log book)

ITEM	TOTAL ACCUMULATED TO DATE*	19 ___ JAN	19 ___ FEB	19 ___ MAR	19 ___ APR	19 ___ MAY	19 ___ JUN	19 ___ JUL	19 ___ AUG	19 ___ SEP	19 ___ OCT	19 ___ NOV	19 ___ DEC
TOTAL PILOT-TIME													
FIRST PILOT													
COPILOT													
A/C COMANDER													
SPECIAL CREW TIME													
INSTRUMENT TIME--TOTAL													
ACTUAL													
SIMULATED													
GCA APPROACH													
CCA APPROACH													
JET PENETRATIONS													
OTHER TYPE APPROACH													
TOTAL NIGHT TIME													
LANDINGS—TOTAL													
FCL													
OTHER L/S													
CARRIER ARRESTED													
TOUCH AND GO													
BOLTERS													
CATAPULT SHOTS													

*Accumulated to date of opening this log, for those items for which the record is available.

Figure 10-12. Flight Record Summary (OPNAV 3670/31)

was opened (or even further if the individual wishes).

b. It is suggested that the current year be entered on the first line. Then, on succeeding lines, enter the identity of that to be summarized (i.e., the T/M/S of aircraft (P-3C, F-4J, etc.)), the kind of flying time (FPT, CPT, SCT), instrument approaches, landings, or any other pertinent data. When the year is over, enter the number of the next year on the next line and start a new set of items to be summarized.

10.5.2.6 Flight-by-Flight Record (Figure 10-14)

a. Space is provided for 19 flights per page. If that number is exceeded for any month, sum the first 19 flights on the line "TOTAL THIS PAGE," post the totals on the first line of the next page, and continue entries. At the end of each month, all total spaces at the bottom of the page should be completed. Exception may be made for pilots who fly infrequently. In such cases, several months may be included on one page. The applicable month will be entered on the line preceding the first flight. Page totals will be entered at the bottom after each page is completed. Fill out pages and lines in chronological order as to year, month, day, and takeoff time. The date of a flight recorded in the Aviators Flight Log Book is the date upon which the flight started and not the date it ended. The number of flights will be entered in the "REMARKS" column. For months during which no flights were made, enter (on the first line

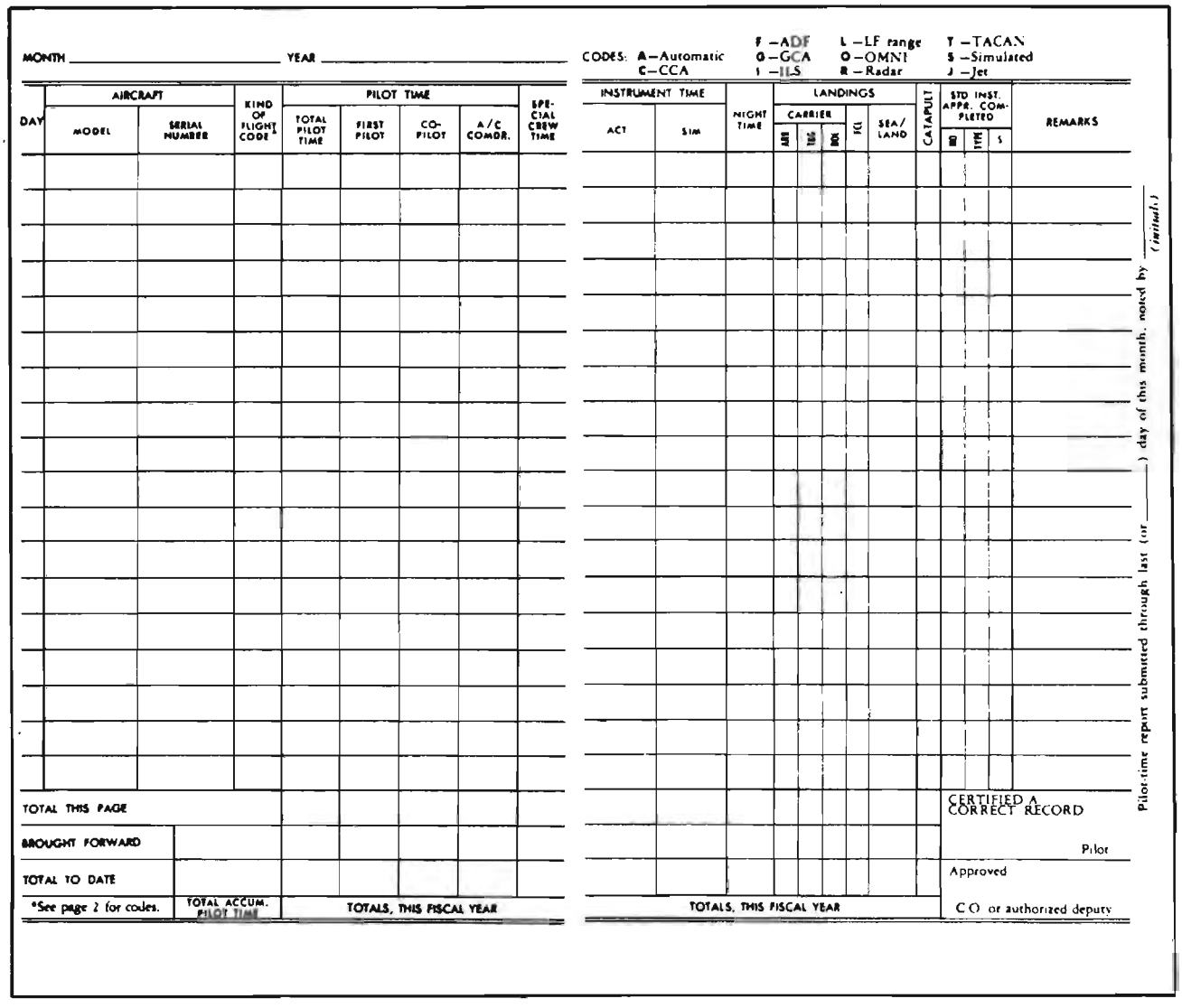


Figure 10-14. Flight Record (OPNAV 3760/31)

last entry at the end of each fiscal year and upon detachment of the individual. Spaces for those signatures are at the lower right corner of the form and are titled "CERTIFIED A CORRECT RECORD" and "Approved." Signature of the commanding officer or his/her authorized deputy signifies "approval" of all entries made for the time period. "Approval" means:

(1) Apparent compliance in all respects with the provisions of this instruction on maintenance of the log book.

(2) All applicable instances of accident and flight rule violations since last "approval" have been duly recorded in the log book.

10.5.2.7 Flight Clothing Record (Figure 10-15)

a. Use of this form is self-evident; local practices in accordance with supply requirements shall be followed.

b. When opening a new log book, the last entry for each item appearing in the previous log book shall be carried forward.

10.5.2.8 Mishap and Flight Rule Violation Record. There are two forms for this section: a "summary record" (one page) and a "mishap record" (three pages) as shown in Figures 10-16 and 10-17. Use these records in accordance with paragraph 3.8. Care shall be exercised to avoid the use of information from aircraft

ACCIDENT AND FLIGHT RULE VIOLATION RECORD

SUMMARY RECORD (*Negative report by zero number of incidents; to be signed by Commanding Officer or his authorized deputy*)

	PERIOD		NUMBER OF		SIGNATURE
	YEAR	QUARTER	ACCI-DENTS*	RULE VIOL.	
Summary incidents prior to this book & subsequent 1-1-50	19				Signatures on record in previous log book authenticated:
	19				
	19				
	19				
	19				
	19				
Year in which this log book began	19__	Jan-Mar			
		Apr-Jun			
		Jul-Sep			
		Oct-Dec			
Remaining period covered by this log book	19__	Jan-Mar			
		Apr-Jun			
		Jul-Sep			
		Oct-Dec			
	19__	Jan-Mar			
		Apr-Jun			
		Jul-Sep			
		Oct-Dec			
	19__	Jan-Mar			
		Apr-Jun			
		Jul-Sep			
		Oct-Dec			
	19__	Jan-Mar			
		Apr-Jun			
		Jul-Sep			
		Oct-Dec			
	19__	Jan-Mar			
		Apr-Jun			
		Jul-Sep			
		Oct-Dec			
	19__	Jan-Mar			
		Apr-Jun			
		Jul-Sep			
		Oct-Dec			

*Show ONLY those involving pilot error.

Figure 10-16. Accident and Flight Rule Violation Record (OPNAV 3760/31)

MISHAP RECORD (*Incident Record*) (*To be signed by an officer authorized to sign Report of Fitness or Evaluation Sheet of the pilot*)

Date ____ Model of aircraft ____
Damage ____ Primary cause factor ____
Flying regulation violated ____

Remarks ____

Entry approved: Commanding

Date ____ Model of aircraft ____
Damage ____ Primary cause factor ____
Flying regulation violated ____

Remarks ____

Entry approved: Commanding

Date ____ Model of aircraft ____
Damage ____ Primary cause factor ____
Flying regulation violated ____

Remarks ____

Entry approved: Commanding

Date ____ Model of aircraft ____
Damage ____ Primary cause factor ____
Flying regulation violated ____

Remarks ____

Entry approved: Commanding

Figure 10-17. Mishap Record (OPNAV 3760/31)

past and future program evaluation, and pilot compliance with established minimum standards. BUPERS annually convenes a flight board to review pilot flight activity via the IFARS data bank against the annual flying requirements. Each year, the Naval Safety Center mails to reporting individuals their flight data report for the previous fiscal year.

10.8.3 Applicability. Flight data submitted through the NAVFLIRS provides the IFARS data to the Naval Safety Center. IFARS data is applicable to naval aviator, student naval aviator, naval flight officers, aviation pilots flying naval aircraft, naval flight surgeons, and aerospace physiologists/psychologists in a DIFOPS and DIFDEN status on active duty or participating in the Navy or Marine reserve program. IFARS data is also required when any of the above personnel receive training in authorized simulator listed by CNO (N889F).

CHAPTER 11

General Instructions on Duty Involving Flying and Annual Flight Performance Requirements

11.1 SCOPE, PURPOSE, AND APPLICABILITY

It is accepted that duty involving flying constitutes hazardous duty, and it is recognized that additional pay should be provided as incentive to engage and remain in hazardous occupations. This chapter sets forth the policies for practical application of the above principle and provides instructions concerning mandatory requirements that will ensure that resources allocated to flying activities are applied economically and result in maximum benefit to fleet operations. The purpose of this chapter is to:

a. Summarize the policies concerning the flying status of all active duty and reserve Navy and Marine Corps personnel holding aeronautical designations and who are entitled to receive flight pay in accordance with the provisions of the DOD Military Pay and Allowance Manual.

b. Prescribe criteria, standards, and regulations to ensure that the skill of all aeronautically designated personnel is maintained at acceptable levels of readiness and to enhance aviation safety.

c. Implement the logging and reporting of major flight simulator time.

d. Provide criteria for incentive pay entitlement under ACIP and HDIP.

e. This chapter is based upon the provisions contained in Section 301 of Title 37 of the U.S. Code and related policies established by the Secretary of Defense and the Secretary of the Navy. It shall apply to all aeronautically designated (rated) officer personnel assigned to duty in a flying status involving operational or training flights (DIFOPS), duty in a flying status not involving flying (DIFDEN), and enlisted personnel when assigned to duty in a flying status involving operational training flights (DIFCREW/DIFTEM).

11.1.1 General Policies

11.1.1.1 Flying in Other Than Military Aircraft. Personnel assigned to operational flying billets may fly in other than military aircraft if such flying is inherent in the duty assignment of the individual concerned. Aeronautically designated personnel, when recommended by competent authority and approved by CNO or CMC (Code ASM), may perform operational flying in other than military aircraft of the Armed Services. When so directed, such flying shall be conducted only by personnel qualified to perform such duties and shall be approved by the authority controlling the aircraft. Individual flying time (first pilot, copilot, and special crew time) so acquired may be credited towards minimum annual and semiannual flying requirements.

11.1.1.2 Flying in a Leave Status

a. Under conditional ACIP, all or any combination of individual flying time acquired by those aeronautically designated personnel assigned to operational flying billets or commands assigned to DIFOPS is creditable for flight pay except that flown while in a leave status.

b. Individual flight time acquired in a leave status may be used to fulfill the minimum annual and semiannual flying requirements.

11.2 OPERATIONAL FLYING

a. Operational flying duty means flying performed under competent orders by designated (rated) members while in assignments in which basic flying skills are normally maintained in the performance

11.2.2 Additional Ratings

a. Officers possessing additional aeronautical ratings (astronauts, naval flight officers) will comply with the flight time requirements for pilots (excluding flight surgeon).

b. Flight surgeons qualified as naval aviators under the provisions of OPNAVINST 1542.4 shall meet the flight time minimums for pilots as set forth in this instruction.

11.2.3 Annual Flying Requirements for Aeronautically Designated Officer Personnel

11.2.3.1 Minimum Flying Hours

a. To assure an acceptable minimum level of readiness and to enhance aviation safety, the following annual and semiannual minimum flying hours shall be accomplished.

NAVAL AVIATOR

Fiscal Year Minimum Flying Hours
(Less than 20 Years Aviation Service)

	Semiannual	Annual
Pilot Time	40	100
Night Time	6	12
Instrument Time	6	12

Note

- Pilot time includes time credited as first pilot and copilot. At least 50 percent of all the annual minimum pilot requirements must be gained through flying. Of that, 50 percent must be first pilot time. Copilot time may be credited toward the accomplishment of the remaining flying hour requirements. Special crew time does not count towards satisfaction of the annual pilot time requirements set forth in this instruction. Paragraph 11.6 discusses logging of simulator time.

- Instrument time requirements are applicable to both fiscal year and an individual's instrument rating requalification.

- For example, an individual must meet instrument flight minimums for *both* the fiscal year (i.e., October through September) *and*, during the year, between the date of last instrument checkflight and subsequent instrument checkflight.

NFO, FLIGHT SURGEONS

Fiscal Year Minimum Flying Hours

	Semiannual	Annual
Special Crew	24	48

b. Fiscal year minimum flying hours for designated naval aviators who have completed 20 years of aviation service and are assigned to operational flying billets designated as 1302, 1312, or 1512 and USMC DIFOPS commands.

	Semiannual	Annual
Pilot Time	25	50
Night Time	3	6
Instrument Time	3	6

(1) Those hours do not reduce prerequisite pilot or instrument hours required for NATOPS qualification and instrument ratings.

(2) Individual aviation service entry dates (ASED) should be utilized to determine years of aviation service completed.

(3) Enlisted and nondesignated officers:

Fiscal Year Minimum Flying Hours

	Semiannual	Annual
Special Crew Time	24	48

c. Marine aviators undergoing phase I training as outlined by MCO 3500.14D (T&R Manual, Vol. I) shall not be accountable for meeting semiannual/ annual minimums as outlined in this instruction until they have received their primary aircraft military occupational specialty (MOS) designations, which are assigned upon completion of phase I training.

11.2.4 Prorating Minimums

a. Minimum annual/semiannual flying hour requirements shall be prorated based on each full month an individual is attached to a DIFOPS billet/ command (i.e., an aviator in DIFOPS status who is assigned to DIFDEN status and departs during July

Type Qualification	Initial Qualification Required	Renewal Interval	Requirements By Flight Status				Waiver Authority
			DIFOPS			DIFDEN	
			1301/1311/ 1511	1302/1312/ 1512/1812	USMC	1300/1310/ 1510/USMC	
NATOPS Qualification	Yes	Annually	Yes	No (1)	Yes	No	None
Instrument Rating	Yes	Annually	Yes	No (1)	Yes	No	CNO/CMC
Annual Pilot Hour Minimums	No	Annually	100 Hrs. (6)	100 Hrs. (6)	100 Hrs. (6)	None	CNO/CMC/ COMNAVRESFOR/ CG FOURTH MAW
Annual Instrument Hours	No	Annually	12 Hrs. (6)	12 Hrs. (6)	12 Hrs. (6)	None	CNO/CMC/ COMNAVRESFOR/ CG FOURTH MAW
Annual Night Hours (8)	No	Annually	12 Hrs. (6)	12 Hrs. (6)	12 Hrs. (6)	None	CNO/CMC/ COMNAVRESFOR/ CG FOURTH MAW
Physical Examination	Yes	Annually	Yes	Yes	Yes	Yes	BUMED/BUPERS/ CMC
Physiology NAPTP	Yes	4 Years (2, 3)	Yes	Yes	Yes	No (7)	TYCOMS
Emergency Egress Training	Yes (4)	Annually (5)	Yes	Yes	Yes	No (7)	TYCOMS
Water Survival NAWSTP	Yes	4 Years (3)	Yes	Yes	Yes	No (7)	TYCOMS

NOTES:

1. Required only if functioning as pilot in command.
2. Low pressure refresher training not required in rotary-wing aircraft unless required by special mission.
3. **Refer to paragraph 8.4.2.**
4. Dynamic ejection seat training required prior to flight in aircraft equipped with ejection seat.
5. Static training required prior to flight in different type ejection seat. **(Refer to paragraph 8.4.1).**
6. Annual minimums for naval aviators who have completed 20 years of aviation service are 50 pilot hours, 6 instrument hours, and 6 night hours.
7. Required if in flying status with waiver.
8. Half the night time logged for the fulfillment of minimum pilot requirements must be unaided night vision time.

Figure 11-1. Aviation Qualification/Currency Requirements Summary (Naval Aviator)

Type Qualification	Initial Qualification Required	Renewal Interval	Requirement By Flight Status		Prior to Designation	Waiver Authority
			DIFCREW (Crewmember) 78XX 82XX	DIFTEM (Non Crew)		
NATOPS Qualification	N/A	Annually	Yes	No	Yes	TYCOM (9)
Flight Hour Requirement	No	N/A	48/Yr	4/month	As Appropriate	CNO/CMC/ COMNAVRESFOR/ CG FOURTH MAW
Physical Exam	Yes	(7)	Yes	Yes	Yes	BUMED/BUPERS/ CMC
Physiology NAPTP	Yes (8)	4 Years (1, 4)	Yes	Yes	Yes	TYCOMS (8)
Emergency Egress Training	Yes (2)	Annually (1, 3)	Yes	Yes	Yes	TYCOMS
Water Survival NAWSTP	Yes (8)	4 Years (1)	Yes	Yes	Yes	TYCOMS (8)
NEC Requirements	7801/ 8201	N/A	(5)	(6)	(5)	COMNAVMIL-PERSCOM
MOS Requirements						

NOTES:

1. Refer to paragraph 8.4.2.
2. Dynamic ejection seat training required prior to flight in aircraft equipped with ejection seat.
3. Static training required prior to flight in different type ejection seat. (Refer to paragraph 8.4.1).
4. Low pressure refresher training not required in rotary wing aircraft.
5. Must qualify for assigned Distribution NEC within 18 months. While undergoing training member must hold a 78XX or 82XX NEC . NEC qualification required prior to designation.
6. If a member is in training for a crewmember position, he/she must hold a 7801 or 8201 NEC. Members assigned under special mission categories do not require NEC identification. (BUPERSINST 1326.4 refers.)
7. Renewal requirements as stated in the Manual of the Medical Department, U.S. Navy, paragraph 15-60.
8. Initial training requirement may be waived by CNO/CMC only.
9. Annual NATOPS evaluation (flight and/or ground) may be waived by type commander (TYCOM) for DIFCREW whose command is not assigned the type aircraft in which individual is qualified. DIFCREW members not within TYCOM chain of command submit to CNO (N889) via chain of command.

Figure 11-3. Aviation Qualification/Currency Requirements Summary (NAC)

CODE	DEFINITION
A	Continuous ACIP (0 to 12 years) — An aeronautically designated officer or aviation student with ASED prior to 2 Oct 79 or an aeronautically designated officer with ASED between 2 Oct 79 and 30 Sep 85 who had completed at least 72 MOF as of 1 Oct 91.
B	Continuous ACIP (12 to 18 years) — An aeronautically designated officer with from 12 to 18 years of aviation service who has met all criteria for code A and has completed at least 72 MOF prior to 12 years aviation service.
C	Conditional ACIP (12 to 18 years) — An aeronautically designated officer with from 12 to 18 years aviation service who has not performed the required MOF outlined for codes B and T. NOTE: To be entitled to receive ACIP this officer must: (1) meet DOD Pay Manual flying requirements of 4 hours per month and (2) be under DIFOPS orders and be in an operational flying billet (billet designator ending in 1 or 2)
D	Continuous ACIP (18 to 25 years) — An aeronautically designated officer with from 18 to 25 years aviation service who has met all criteria of code B and subsequently completed 132 MOF prior to 18 years aviation service.
E	Continuous ACIP (18 to 22 years) — An aeronautically designated officer with from 18 to 22 years aviation service who has met all criteria for code B and subsequently completed at least 108, but less than 132 MOF, prior to 18 years aviation service.
F	Conditional ACIP (over 18 years) — An aeronautically designated officer with from 18 to 22 years aviation service who has met all criteria for code B, but did not complete at least 108 MOF prior to 18 years aviation service. (Note under code C applies.)
G	Conditional ACIP (over 22 years) — An aeronautically designated officer who has met all criteria of code E and has reached 22 years of commissioned service. (Note under code C applies.)
H	ACIP Terminated — An aeronautically designated officer who has been promoted to the paygrade of 0-7 or above and has reached 25 years of commissioned service.
I	Conditional ACIP (over 25 years) — An aeronautically designated officer who has met all criteria of code D and has reached 25 years of commissioned service. (Note under code C applies.)
J	Conditional ACIP — Designated flight surgeons, aerospace medical physiologists, and aerospace physiologists. These officers have completed a course of study in aerospace medicine and are entitled to conditional ACIP only. (Note under code C applies.)
K	ACIP Termination — An aeronautically designated officer who has had flight status temporarily terminated because of medical incapacitation.
L	ACIP Termination — An aeronautically designated officer who has had flight status permanently terminated through attrition, voluntary termination, or naval aviator evaluation board.
M	ACIP Termination — An aeronautically designated officer or medical officer who has had flight status permanently terminated because of medical incapacitation.
N	Continuous ACIP (0 to 12 years) — An aeronautically designated officer or aviation student with ASED on or after 1 Oct 85 with less than 12 years aviation service.
O	Continuous ACIP (12 to 18 years) — An aeronautically designated officer with from 12 to 18 years aviation service who has met all criteria for code N and has completed at least 108 MOF prior to 12 years aviation service.
P	Continuous ACIP (18 to 25 years) — An aeronautically designated officer with from 18 to 25 years aviation service who has met all criteria for code O or T and completed 144 MOF prior to 18 years aviation service.
Q	Continuous ACIP (18 to 22 years) — An aeronautically designated officer with from 18 to 22 years aviation service who has met all criteria for code O or T and completed at least 120, but less than 144 MOF, prior to 18 years aviation service.
R	Continuous ACIP (0 to 12 years) — An aeronautically designated officer with ASED prior to 1 Oct 85 who had less than 72 MOF as of 1 Oct 91.

Figure 11-4. Aviation Status Indicator Codes (Sheet 1 of 2)

orders to participate in frequent and regular aerial flights must meet DOD Pay Manual flying requirements to be entitled to receive HDIP.

Note

Refer to MILPERSMAN and Chapter 12 of this instruction for policies concerning failure to meet flying hour minimums.

11.5 WAIVERS OF MINIMUM FLYING REQUIREMENTS

11.5.1 Authority to Waive. The Chief of Naval Operations; Commandant of the Marine Corps; Commander, Naval Air Reserve Force; Commanding General, 4th Marine Aircraft Wing; and all type commanders may waive any or all of the minimum annual requirements specified in this chapter, except flight pay requirements, when it is determined that the assignment of aeronautically designated personnel to a particular billet makes it impractical to fulfill the annual requirements.

11.5.2 Action Required

a. Commanding officers and administrative seniors shall review flight records of assigned aeronautically designated officers at the end of each fiscal year. Personnel who are deficient in the minimum flight time requirements stated in this chapter shall submit individual waiver requests containing the following information (Report Symbol OPNAV 3710-19):

(1) Rank, name, social security number, designator/MOS

(2) Aviation service entry date

(3) Instrument, night, and total flight time for the fiscal year by quarter

(4) A signed copy of the Standard Form 88 and medical endorsement if pertinent

(5) Type of orders issued (DIFOPS or DIFDEN) and dates to determine months DIFOPS/DIFDEN during the fiscal year

(6) Significant temporary additional duties that prevented the achieving of required flight time, if applicable

(7) PCS en route delays and date of arrival at final DIFOPS duty station, if applicable

(8) Name(s) of command(s) and associated unit identification code(s)/reporting unit code (UIC/RUC) and dates assigned during the fiscal year

(9) Billet title(s) assigned and associated billet sequence code(s) and designator code(s) as listed on the activities allowance or appropriate Marine Corps TO during the fiscal year

(10) Cause for the flight time delinquency.

b. Waiver Requests shall be marked "For Official Use Only" and forwarded to the type commander; CNO (N889); CMC (AAB); or Commander, Naval Air Reserve Force (Code 516), as appropriate. Waivers endorsed as "not approved" by type commanders shall be forwarded to CNO or CMC for final disposition. If aircraft availability or scheduling problems prevented accomplishment of flight minimums, the reporting custodian shall provide an appropriate endorsement for the waiver request fully outlining those circumstances that were beyond the control of the individual.

c. Waiver requests shall be submitted within 30 days following the end of the reporting period or when it becomes apparent that the minimums will not be met. Any delay in submission must be satisfactorily explained by the individual and addressed in the forwarding endorsement.

Note

Administration of the semiannual minimum flying hour program for naval personnel is the responsibility of the individual concerned and command assigned. A waiver of semiannual minimums is not required.

d. Flight status selection board actions that may be taken in response to waiver request from Navy personnel include:

(1) Granting waiver

(2) Conversion of billet to DIFDEN status

(3) Issuing letter of caution

(4) Direct convening of a locally constituted Field Naval Aviation Evaluation Board to consider the flight time deficiency

(5) Direct in the case of captains and above, via BUPERS, a specified case may be referred to the

with these instructions. Responsible seniors shall ensure that sufficient opportunities are afforded all aeronautically designated personnel under their command to comply with the annual minimum individual flying time requirements set forth herein.

11.7.3 Flight Status Selection Boards

a. The Navy Flight Status Selection Board (FSSB) functions on a continuing basis to facilitate flight time administration of the ACIP pay program for naval personnel. Subject to the call of the senior member, the incumbent head, Aviation Manpower/Undergraduate Flight Training Branch (N889J), the board examines records of all aviation designated naval officers (naval aviators, naval flight officers, and flight surgeons) who have failed to achieve the specified minimum annual flight time requirements, provides action recommendations to CNO (N889) concerning flight time deficiencies, and reviews requests for conversion of aviation officer billets to DIFOPS or DIFDEN status.

b. For Marine Corps personnel, a separate flight status selection board functions under guidelines established by the Commandant of the Marine Corps (Code ASM) as published in MCO P1000.6 (ACTS Manual).

11.8 REVOCATION OF ORDERS TO DUTY INVOLVING FLYING

In addition to the procedures outlined in paragraph 11.7, orders to duty in a flying status will be revoked by competent authority in the case of those aeronautically designated personnel who:

a. Voluntarily request duty not involving flying

b. Fail to meet aviation physical or psychological qualifications

c. Fail to meet aeronautical standards or for other valid reasons are recommended for nonflying duties by a Naval Aviation Evaluation Board or in the case of the Marine Corps, an FSSB

d. Have passed statutory retirement.

CHAPTER 12

Classification and Qualification of Flight Personnel

12.1 SCOPE

This chapter prescribes flight personnel classifications and establishes minimum requirements for various qualifications. Requirements prescribed here shall be used as the minimum when preparing aircraft NATOPS manuals or other amplifying directives.

12.2 MULTIPILOTED FIXED-WING AIRCRAFT (PILOT)

12.2.1 Pilot Classification

12.2.1.1 Classification. The following classifications are established for pilots of multipiloted fixed-wing aircraft requiring a qualified copilot to ensure accomplishment of the mission. The requirement for qualification as third pilot is optional. All requirements set forth herein for qualification as third and second pilot shall be met prior to designation as second pilot.

a. Aircraft commander

b. Second pilot

c. Third pilot.

12.2.1.2 Descriptive Titles. The foregoing classifications do not prohibit the use of descriptive titles that are indicative of a distinct aircraft class or employment (i.e., patrol plane commander, transport plane commander, COD transport plane commander, patrol plane second pilot, etc.). A descriptive title must be compatible with a significant feature of both the aircraft and its employment. For example, a pilot who qualifies for aircraft commander in a patrol class aircraft transporting passengers and cargo would qualify as a plane commander, not as a patrol plane commander or transport plane commander.

12.2.2 Specific Requirements for Qualification. The requirements listed below shall be met by pilots qualifying in multipiloted fixed-wing aircraft requiring a qualified copilot to ensure accomplishment of the mission. Commanding officers and qualifying authorities, or higher authority, shall prescribe proficiency standards, detailed factors, and specific minimums based on this chapter, the class and model aircraft, and unit mission. Within each classification, the weight and emphasis on the factors enumerated must be determined by the activity. The hours specified are the minimum required and they may be increased in individual manuals as aircraft increase in size and/or complexity. Waivers of minimums may be granted by the appropriate immediate superior in command commensurate with demonstrated ability and only when deemed necessary to accomplish events of the unit mission.

12.2.2.1 Third Pilot. To be qualified as a third pilot an individual shall:

a. Have pilot time in class and model as required by the commanding officer or higher authority and demonstrate a satisfactory level of skill in the following:

(1) Ground handling

(2) Flight technique in normal and emergency procedures.

b. Demonstrate thorough knowledge through oral and/or written examination in the following:

(1) Model aircraft and all associated equipment (flight manual)

(2) Fuel weight, aircraft configuration and store/cargo loading as they effect takeoff, mission, and landing performances

(3) Appropriate NATOPS manual

(4) Survival and first-aid

tasks or employment that demand operational and tactical knowledge or proficiency differing appreciably from that gained on initial qualification.

12.2.3.3 Time Limits. Under normal conditions, a pilot serving in a billet that requires eventual qualification as aircraft commander will gain initial qualification within 24 months after reporting to the command. Requalification after lapse of qualification should be attained within 6 months. Type commanders, using these limits as a guide, shall establish specific maximum time limits for qualification and requalification based on the class aircraft and unit employment. Amplifying instructions shall prescribe procedures for the disposition of pilots who fail to qualify within the specified time limit.

12.3 MULTIPILOTED ROTARY-WING AIRCRAFT (PILOT)

12.3.1 Pilot Classification. The following classifications are established for pilots of multipiloted rotary-wing aircraft that may or may not require a qualified copilot to ensure accomplishment of the mission.

a. Helicopter aircraft commander

b. Helicopter second pilot.

12.3.2 Specific Requirements for Qualification. Requirements listed below are to be met by pilots qualifying in multipiloted rotary-wing aircraft. Commanding officers and qualifying authorities, or higher authority, shall prescribe proficiency standards, detailed factors, and specific minimums based on this chapter, class and model aircraft, and the unit mission. Within each classification, the weight and emphasis on the factors enumerated must be determined by the activity. Waivers of minimums may be granted by the appropriate immediate superior in command commensurate with demonstrated ability and only when deemed necessary to accomplishment of the unit mission.

12.3.2.1 Helicopter Second Pilot. In addition to being a designated helicopter pilot, a helicopter second pilot shall:

a. Have pilot hours in class and model as required by the commanding officer or higher authority and demonstrate satisfactory proficiency in the following:

(1) Ground handling

(2) Flight technique in normal and emergency procedures for flight including autorotations and the use of flotation gear, if applicable

(3) Navigation (all types applicable to unit mission and model aircraft)

(4) Tactical employment of the aircraft and associated equipment in all tasks of the unit mission

(5) Night tactical operations and operational instrument flying within the capability of the model.

b. Possess a current instrument rating

c. Demonstrate knowledge through oral and/or written examination on the following:

(1) Model aircraft and all associated equipment

(2) Operational performance in all flight maneuvers

(3) Weight and balance

(4) Appropriate NATOPS manual

(5) Survival and first-aid

(6) Applicable technical orders and notes, OPNAV instructions, FAR, ICAO procedures, SCATANA plans, and NAVAIRSYSCOM instructions and technical directives

(7) Search and rescue procedures

(8) Communication

(9) Unit mission and tactics

(10) Navigation

(11) Flight planning

(12) Local and area flight rules

(13) Fleet and type tactical instructions and doctrine

(14) Applicable portions of NWPs, FXPs, JANAPs, ACPs, and ATPs

(15) Recognition applicable to unit missions.

aircraft class or employment. Such classifications must serve to indicate progress and achievement levels prior to final qualifications (i.e., patrol plane navigator and patrol plane tactical navigator indicate progress toward designation as ASW tactical coordinator for patrol class aircraft).

12.4.2 Specific Requirements for Qualification. The requirements listed below shall be met by NFOs qualifying in aircraft requiring a qualified NFO crewmember to ensure accomplishment of the mission. Commanding officers and qualifying authorities, or higher authority, shall prescribe proficiency standards, detailed factors, and specific minimums based on this chapter, the class and model aircraft, and the unit mission. Within each classification, the weight and emphasis on the factors enumerated must be determined by the activity. Waivers of minimums may be granted by the appropriate immediate superior in command commensurate with demonstrated ability and only when deemed necessary to accomplishment of the unit mission. To be qualified as an NFO crewmember for a specific class and model of aircraft, an individual shall:

a. Have flight hours in class and model as required by the commanding officer or higher authority and demonstrate a satisfactory level of skill in the following:

(1) Tactical employment of the aircraft and all associated equipment in all tasks of the unit mission

(2) Flight technique during normal and emergency procedures

(3) Navigation (all types applicable to unit mission and aircraft model).

b. Demonstrate thorough knowledge through oral and written examination on the following:

(1) Model aircraft and all associated equipment (flight manual)

(2) Unit mission and tactics

(3) Fleet and type tactical instructions and doctrine

(4) Applicable portions of NWPs, FXPs, JANAPs, ACPs, and ATPs

(5) Recognition applicable to unit mission

(6) Communication

(7) Navigation

(8) Flight planning

(9) Local and area flying rules

(10) Flight safety

(11) Search and rescue procedures

(12) Survival and first-aid

(13) Fuel weight, aircraft configuration, and store/cargo as they effect takeoff, mission, and landing performance

(14) Applicable technical orders and notes, COMNAVAIRSYSCOM instructions and technical directives, OPNAV instructions, Federal Aviation Regulations, ICAO procedures, and SCATANA plans

(15) Appropriate NATOPS manual.

c. Possess current instrument qualifications as delineated in Chapter 13.

d. Satisfactorily complete a NATOPS evaluation in model.

12.4.3 General Requirements for Qualification

12.4.3.1 Initial Qualification. On initial qualification, an NFO will normally be required to progress through any prescribed intermediate classification levels before being qualified in class and model.

12.4.3.2 Requalification

a. After having gained initial qualification, requalification in model or qualification in another model of the same class will not require progression through intermediate classification levels. Such requalification or qualification shall consist of an appropriate checkout, including a minimum flight-familiarization phase as established by the commanding officer or higher authority, and demonstration of possession of the knowledge, proficiency, and capabilities commensurate with the classification.

b. After having gained initial qualification in a type and class of aircraft, on subsequent qualification in another type or class, progression through any intermediate classification may be required of NFOs who report to a command, unit, or activity whose

12.7.4 Maximum Time Limit for Qualification as Naval Air Crewman

a. Personnel under DIFCREW flight orders shall be allowed a maximum of 18 months from the date of reporting on board for duty at a permanent duty station (after successful completion of FRS training) or 18 months from the time training commenced for command-nominated personnel to achieve qualification as a naval air crewman. During that period, they shall be considered in training for designation as naval aircrew unless qualification is achieved earlier. DIFCREW flight orders for personnel who fail to qualify as naval aircrew within the allotted 18-month period shall be suspended.

b. Personnel under DIFTEM flight orders shall be allowed a maximum of 18 months from the date of authorization. Personnel shall be in training for a valid billet, and requests for DNEC and DIFCREW status shall be submitted no later than 8 months prior to DIFCREW vacancy occurring. DIFTEM flight orders shall be suspended for DIFTEM personnel who fail to qualify within 18 months.

12.7.5 Time of Requalification for Naval Air Crewman. Requalification should be accomplished within the below time limit of reporting to a unit that has the same type of aircraft as that within which the aircrew designation was attained. Annual NATOPS evaluations are separate qualifications. For guidance on time limits for expired annual NATOPS evaluations, see Chapter 2, paragraph 2.4.

Lapse of 2 years or less	6 months
Lapse of more than 2 years	12 months
Selected Air Reserves	12 months

12.7.6 Qualification Waivers for Naval Air Crewmen. Immediate seniors (wing, functional wing commanders) may waive initial and requalification time limits for aircrew personnel who fail to qualify within prescribed time limits. Justification for such waivers includes lack of appropriate security clearances, duty assignments, or periods of TAD. Appropriate documentation shall be made in the service record, NATOPS training jacket, and to BUPERS.

12.8 QUALIFYING AUTHORITIES

12.8.1 Aeronautical Organizations. Commanding officers or higher authority in the chain of command are empowered to qualify flight personnel in the classifications established here and to issue the certification thereof. The immediate superior in command to the commanding officer or higher authority may assume the function of approving the qualifications of aircraft commanders and issue the certifications of qualification. In such cases, amplifying instructions shall be specific in regard to the authority vested in the commanding officer.

12.8.2 Nonaeronautical Organizations. The senior aviation line officer attached to activities that are not a part of the aeronautical organization (naval missions, etc.) is empowered to qualify flight personnel in the appropriate classifications and to issue certification. Such activities may request checkout and examination assistance from the nearest naval aviation command with the required personnel and facilities.

12.8.3 Readiness Training Squadrons. Commanding officers of readiness training squadrons or higher authority may, with respect to replacement flight personnel, determine initial qualification as flight personnel based on satisfactory completion of applicable NATOPS requirements.

12.8.4 Guidance for Qualifying Authorities

12.8.4.1 Qualification Opportunity

a. Flight personnel should be afforded ample opportunity to complete the necessary training to permit qualification without delay after minimum experience requisites are met.

b. Pilots shall be advanced commensurate with their experience and demonstrated ability.

c. Pilots should be assured the opportunity to qualify for aircraft command during their first tour of duty.

12.8.4.2 Previous Experience

a. Flight experience acquired in previous commands in varied aircraft is important to overall qualification and due weight shall be given such experience in qualifying and requalifying flight personnel in accordance with this instruction. It is not the intention of this chapter to requalify pilots currently designated.

b. A pilot qualification shall remain effective as long as the pilot remains current in class and model and regularly performs missions required of the command unit or activity unless specifically revoked by the qualifying authority or appropriate superior. Commanding officers shall always retain the right to

b. Provide a standard helicopter aerodynamics syllabus for use of requesting commands.

12.10 REPORTS

12.10.1 Navy Flight Personnel. Navy flight personnel who have qualified in one of the classifications shall have a certification signed by the qualifying authority placed in their officer service record (NavPers 3021) or enlisted service record (NavPers 601), as appropriate. Certifications shall indicate the class and model aircraft in which qualified, together with a concise statement of the type of operations in which qualified (i.e., ASW, mining, transport, utility, etc.). The reporting senior shall enter in the duties section of the report on the fitness of officers a statement indicating such qualification in the next regular report of fitness. A copy of the certification to command multi-piloted aircraft shall be forwarded by the qualifying authority to BUPERS each time a pilot qualifies for command in a separate class aircraft. No other distribution of copies of flight certification is desired.

12.10.2 Marine Corps Flight Personnel. Marine Corps flight personnel who have qualified in one of the classifications shall have a certification signed by the qualifying authority placed in their NATOPS flight personnel training/qualification jacket (OPNAV 3760/32 (11-73)) and their officers qualification record (NAVMC 123A (Rev 10-74)) or enlisted service record book (NAVMC 118a (Rev 1-75)), as appropriate.

CHAPTER 13

Instrument Flight Requirements and Qualifications

13.1 INSTRUMENT RATINGS AND QUALIFICATIONS

13.1.1 Pilots/Naval Flight Officers Required To Maintain Instrument Ratings/Qualifications

13.1.1.1 Requirement. All naval pilots in DIFOPS flying status except DIFOPS Code 2 aviators are required to maintain a valid instrument rating. NFOs in a DIFOPS status are required to maintain a valid instrument qualification. Commanding officers shall use every means available to assist pilots/NFOs in meeting those requirements.

13.1.1.2 Period of Grace

a. Pilots/NFOs returning from DIFDEN status or duties where a valid instrument rating/qualification could not be maintained and who had requirements waived by CNO or CMC shall be granted a period of 6 months in which to requalify.

b. Navy/Marine Corps Reserve pilots/NFOs recalled to active military service in a DIFOPS status shall be granted a period of 6 months from date of first reporting in which to qualify.

13.1.2 Renewal of Instrument Ratings and Qualifications

13.1.2.1 Renewal. Renewal of current instrument ratings for all naval pilots and instrument qualifications for NFOs shall be accomplished annually.

13.1.2.2 Expiration. The expiration date of the instrument rating/qualification will be the last day of the month the evaluation was completed plus 1 year. When pilots/NFOs are ordered to a formal course of flight instruction that includes an instrument syllabus and their instrument rating/qualification expires prior to or during the training period, the instrument rating/qualification may be delayed until the pilot/NFO achieves NATOPS qualification in model aircraft for which the pilot/NFO is undergoing training.

13.1.2.3 Instrument Ground Training, Examination, and Flight Evaluation. Unless otherwise extended in accordance with this instruction, all naval aviators and NFOs in DIFOPS status shall annually:

a. Attend a formal TYCOM-approved instrument ground syllabus if one is available.

b. Satisfactorily complete a written examination covering the following subject areas:

(1) Federal Aviation Regulations as they apply to flight under instrument conditions

(2) Navigational systems and procedures, instrument approach procedures, and radio communication procedures

(3) Meteorology, including the characteristics of air masses, fronts, thunderstorms, microbursts, and windshear; meteorological reports, elements of the DD-175-1, and pilot's responsibility for obtaining a thorough weather brief; and aviation severe weather hazards, to include pilot's responsibility to determine that the route of flight remains clear of aviation severe weather watch areas

(4) Instrument procedures contained in pertinent military directives.

Note

The written instrument examination shall be administered incident to the formal instrument ground training syllabus. When such a syllabus is not available, the command to which the pilot/NFO is assigned for flight shall be responsible for ensuring

(2) Twelve final approaches under actual or simulated instrument conditions, six of which shall be precision approaches and six of which shall be nonprecision.

d. Within the 12 months preceding the date of the instrument evaluation flight:

(1) Twelve hours as pilot under actual or simulated instrument conditions

(2) A total of 18 final approaches under actual or simulated instrument conditions, 12 of which shall be precision and six of which shall be nonprecision.

e. Major flight simulator devices listed by CNO (N889F) may be utilized to meet one-half of the minimum instrument rating requirements.

f. CNATRA is authorized to issue an initial standard instrument pilot rating following successful completion of the naval air training command instrument training syllabus.

g. Renewal of an expired instrument rating for pilots returning to flying duty under provisions of paragraph 13.1.1.2 shall meet the requirements of paragraphs 13.2.1b and c.

13.2.2 Special Rating. Minimum requirements for special instrument ratings include all of the requirements for a standard instrument rating plus the following:

a. Five years of military and nonmilitary flying experience.

b. Two thousand hours of military and/or civil time as a certificated commercial/airline transport pilot.

c. One hundred hours of military actual instrument time.

d. A special instrument rating is recognition of a pilot's experience, demonstrated flight ability, and judgment. Its issuance shall be made accordingly. Fleet Marine Force commanding generals, fleet type commanders, COMNAVAIRESFOR, CG FOURTH MAW, CNATRA, or their delegated representatives may reduce the above minimum requirements. A special instrument rating may be issued to pilots who display exceptional judgment and proficiency in instrument flying procedures if the pilot has at least 3 years military and/or nonmilitary flying experience, has a total of 1,500 hours pilot/copilot time, and meets the other requirements for issuance of a special instrument rating enumerated above.

13.2.3 Failure To Meet Requirements

13.2.3.1 Action. The following action is directed for cases of failure to meet requirements:

a. Board Action — Unless reasons in the case are sound and valid, commanding officers shall direct a pilot who fails to meet the foregoing requirements to appear before a field naval aviator evaluation board in accordance with the current MILPERSMAN, article 3410300 or MCO P1000.6, as appropriate.

b. Command Action — Pilots who are required to qualify for an instrument rating and have not done so shall not be detached from an activity unless a written extension is forwarded to their next duty station or compliance with paragraph a above has been accomplished.

13.2.3.2 Restrictions on Instrument Ratings. Under no conditions shall instrument ratings be issued when the requirements of this chapter have not been met. The endorsement of instrument ratings to limit their applicability or use in any way is not authorized without specific approval of CNO or CMC.

13.2.3.3 Revoking of Instrument Ratings. Any commanding officer authorized to issue an instrument rating is also authorized to revoke the instrument rating of any pilot attached or assigned to his/her command for flying when, in the commanding officer's opinion, the pilot has displayed a lack of instrument flying proficiency.

13.3 AIRCRAFT EQUIPMENT REQUIREMENTS

13.3.1 Instrument Flight Equipment

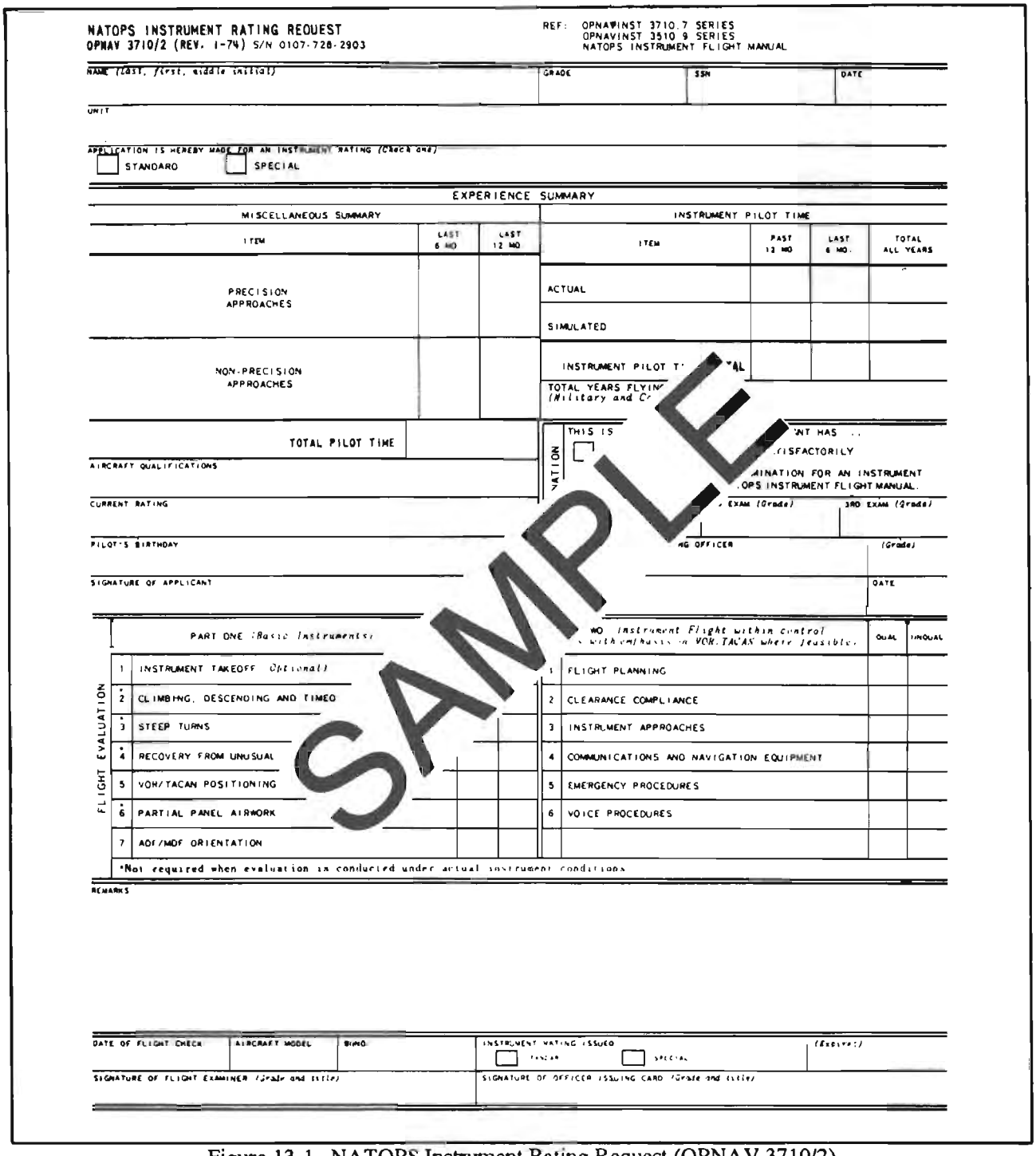
a. The pitot heater and all vacuum pressure or electrical sources for the pilot flight instruments must operate satisfactorily.

b. The aircraft shall be equipped with the following instruments in proper operating condition:

(1) Airspeed indicator

(2) Altimeter

(3) Turn-and-slip indicator



NATOPS INSTRUMENT RATING REQUEST
OPNAV 3710/2 (REV. 1-74) S/N 0107-728-2903

REF: OPNAVINST 3710.7 SERIES
OPNAVINST 3510.9 SERIES
NATOPS INSTRUMENT FLIGHT MANUAL

NAME (Last, First, Middle Initial) | GRADE | SSN | DATE

UNIT

APPLICATION IS HEREBY MADE FOR AN INSTRUMENT RATING (Check one)
☐ STANDARD ☐ SPECIAL

EXPERIENCE SUMMARY

MISCELLANEOUS SUMMARY

ITEM	LAST 6 MO	LAST 12 MO
PRECISION APPROACHES		
NON-PRECISION APPROACHES		
TOTAL PILOT TIME		

INSTRUMENT PILOT TIME

ITEM	PAST 12 MO	LAST 6 MO.	TOTAL ALL YEARS
ACTUAL			
SIMULATED			
INSTRUMENT PILOT TIME			

TOTAL YEARS FLYING (Military and Civilian)

AIRCRAFT QUALIFICATIONS

CURRENT RATING

PILOT'S BIRTHDAY

SIGNATURE OF APPLICANT

VATION — THIS IS ☐ ...NT HAS ... ...ISFACTORILY ...AINATION FOR AN INSTRUMENT ...OPS INSTRUMENT FLIGHT MANUAL.

... EXAM (Grade) 3RD EXAM (Grade)

...NG OFFICER (Grade)

DATE

FLIGHT EVALUATION

	PART ONE (Basic Instruments)	QUAL	UNQUAL
1	INSTRUMENT TAKEOFF (Optional)		
*2	CLIMBING, DESCENDING AND TIMED		
*3	STEEP TURNS		
*4	RECOVERY FROM UNUSUAL		
5	VOR/TACAN POSITIONING		
*6	PARTIAL PANEL AIRWORK		
7	ADF/MDF ORIENTATION		

	...WO (Instrument Flight within control ... with emphasis on VOR/TACAN where feasible)	QUAL	UNQUAL
1	FLIGHT PLANNING		
2	CLEARANCE COMPLIANCE		
3	INSTRUMENT APPROACHES		
4	COMMUNICATIONS AND NAVIGATION EQUIPMENT		
5	EMERGENCY PROCEDURES		
6	VOICE PROCEDURES		

*Not required when evaluation is conducted under actual instrument conditions

REMARKS

DATE OF FLIGHT CHECK | AIRCRAFT MODEL | BUNO

INSTRUMENT RATING ISSUED ☐ STANDARD ☐ SPECIAL (Expires:)

SIGNATURE OF FLIGHT EXAMINER (Grade and title)

SIGNATURE OF OFFICER ISSUING CARD (Grade and title)

SAMPLE

Figure 13-1. NATOPS Instrument Rating Request (OPNAV 3710/2)

APPENDIX A

NATOPS Flight Personnel Training and Qualification Jacket

A.1 INTRODUCTION

A.1.1 Purpose. To provide a consolidated record of the training status and readiness of flight personnel and serve as a repository for certain aviation records accumulated by flight crewmembers during active aviation tours.

A.1.2 Scope. Subject jacket is intended to provide commanding officers with pertinent data to assist in assignment, utilization, and training of individuals. Properly maintained, it presents a cumulative history and concise summary of qualifications. It is not a forum for evaluating the performance of an officer or enlisted air crewmember. The jacket will not become part of the individual's personnel records within BUPERS except as noted in paragraph A.1.6.

A.1.3 Responsibility. Responsibilities pertaining to custody of NATOPS flight personnel training qualification jackets are as follows:

a. Commanding officers shall ensure that custody and maintenance of qualification jackets are in accordance with provisions of this instruction.

b. Ensure that jackets are maintained for all assigned flight personnel.

c. Flight personnel, when flying with a unit other than the one that regularly maintains their jacket, shall ensure that the unit with which they are flying is provided temporary custody of the jacket.

A.1.4 Security. The jacket is "For Official Use Only" in accordance with SECNAVINST 5720.42. No information may be divulged from it, except to persons possessing a need to know. Only the individual and personnel designated in writing by the commanding officer may have access to qualification jackets. In accordance with SECNAVINSTs 5720.42 and 5211.5, attach OPNAV 5211/9, "Record of Disclosure," inside the front cover of the NATOPS jacket, when disclosure of information from the jacket is outside DOD.

A.1.5 Disposition. Upon detachment, the jacket will be reviewed, certified by the commanding officer or a designated representative, and given to the individual. In the event of death, the jacket will be handled in accordance with directives governing disposition of records.

A.1.6 Review. The individual's jacket will be periodically reviewed by the commanding officer or a designated representative to ensure accuracy and currency. The review shall be conducted:

a. Upon reporting to a unit

b. Annually (within 30 days of date of birth)

c. Upon major change in flight status.

A.1.7 Design. The jacket is composed of a cover, standard sectional and topical dividers, and pertinent documents and records. It is divided into four sections. Each section is divided into topical parts with appropriate titles.

A.1.8 Maintenance

a. The jacket shall be maintained in accordance with the provisions of this appendix.

b. No records or documents will be inserted that do not provide pertinent data concerning the aviation status of the individual.

c. Individuals will not insert or remove records without approval of the commanding officer.

A.1.9 Forms. OPNAV 3760/32 through OPNAV 3760/32H may be obtained through normal supply channels in accordance with NAVSUP PUB 2002.

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET
OPNAV 3760/32A (4-81) SN 0107-LF-736-2120

SECTION IA – REVIEW AND CERTIFICATION RECORD

NAME (Last, first, middle initial)	SSN

1. This jacket shall be reviewed by the Commanding Officer or a designated representative as follows:
   a. Upon reporting to a unit.
   b. Annually, within 30 days of birthday.
   c. Upon major change in flight status.
2. This jacket shall be certified by the Commanding Officer or a designated representative upon detachment of the individual.

RECORDS OF REVIEW

DATE	SIGNATURE	DATE	SIGNATURE	DATE	SIGNATURE

SAMPLE

DETACHMENT CERTIFICATION

UNIT	DATE	SIGNATURE	UNIT	DATE	SIGNATURE

Figure A-1. Review and Certification Board

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET
OPNAV 3760/32C (4-81) SN 0107-LF-736-2140

SECTION IIA – FLIGHT PERSONNEL DESIGNATION RECORD

NAME (Last, first, middle initial) | SSN

DATE	DESIGNATION	MODEL	UNIT	PROMULGATION BY	VERIFIED

Figure A-3. Flight Personnel Designation Record

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET

OPNAV 3760/32E (Rev 4-90) S/N 0107-LF-009-7600

SECTION IIIA – SCHOOL/COURSE ATTENDANCE RECORD

NAME *(Last, first, middle)* | SSN

RECORD ALL SPECIALIZED, FORMAL AVIATION SCHOOLS, INCLUDING:

UNDERGRADUATE PILOT/ NFO
FRS SYLLABI
FIRE FIGHTING
FASOTRAGRP SYLLABI
WEAPONS SYSTEMS
FRAMP
MAINTENANCE (3M) COURSES

SCHOOL/COURSE	DATES ATTENDED	PASS/FAIL/SCORE	UNIT	REMARKS	VERIFIED BY

Figure A-5. School/Course Attendance Record

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET
OPNAV 3760/32F (Rev 4-90) S/N 0107-LF-009-7700

SECTION IIIB – OPERATIONAL PHYSIOLOGY & SURVIVAL TRAINING

NAME *(Last, first, middle initial)*	RANK/RATE	SSN

COURSE CATEGORY	TYPE OF TRAINING											
	AVIATION PHYSIOLOGY			EMERGENCY EGRESS			WATER SURVIVAL			LAND SURVIVAL, DWEST, SERE		
	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
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	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
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	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		

TRAINING ACTIVITIES

1. Pensacola, FL	8. Barbers Point, HI	15. Brunswick, ME
2. Miramar, CA	9. Cecil Field, FL	16. FASOTRAGRUPAC
3. Norfolk, VA	10. Cherry Point, NC	17. FASOTRAGRULANT
4. Corpus Christi, TX	11. Whidbey Island, WA	18. MCAS New River, NC
5. Lemoore, CA	12. Beaufort, SC	19. Okinawa
6. El Toro, CA	13. Point Mugu, CA	20. Other (List)
7. Jacksonville, FL	14. Patuxent River, MD	21.

Figure A-6. Operational Physiology and Survival Training (Sheet 2 of 2)

b. Forms may be procured using the following information:

(1) Review and Certification Record, OPNAV 3760/32A, S/N 0107-LF-736- 2120

(2) Record of Flight Equipment Issue, OPNAV 3760/32B, S/N 0107-LF-736- 2130

(3) Flight Personnel Designation Record, OPNAV 3760/32C, S/N 0107-LF-736- 2140

(4) Mission Qualification Record, OPNAV 3760/32D, S/N 0107-LF-009-7500

(5) School/Course Attendance Record, OPNAV 3760/32E, S/N 0107-LF-009-7600

(6) Operational Physiology and Survival Training Record, OPNAV 3760/32F, S/N 0107-LF-009-7700

(7) Examination Record, OPNAV 3760/ 32G, S/N 0107-LF-009-7800

(8) Mishap/Flight Violation Record, OPNAV 3760/32H, S/N 0107-LF-736- 2190

(9) Flight Jacket Divider Tabs, OPNAV 3760/32I, S/N 0107-LF-000-7500.

APPENDIX B

Aircraft Visual Identification System

B.1 GENERAL

This appendix delineates the visual identification system for naval aircraft and provides for assignment of aircraft markings and side numbers that identify aircraft of one unit from those of another. The system provides a means of rapid identification of Navy and Marine aircraft that is simple, flexible, and readily adaptable to expansion in the event of mobilization. Requests for changes or recommendations for assignment of identification letters to new or activated reserve units issued aircraft for custody shall be made to CNO (N889E) via the chain of command.

B.1.1 Unit Identification. CNO will assign unit identification letters for aircraft of air wings/groups and squadrons in accordance with the following guidelines.

B.1.1.1 Present Assignments. Identification letters presently assigned will be retained permanently regardless of transfers of units between fleets.

B.1.1.2 Future Assignments. Future assignments will consist of either a single letter (CNATRA) or a combination of any two letters or numbers indicated below:

Command	First Character	Second Character
NAVAIRLANT	A through M	A through Z
NAVAIRPAC	N through Z	A through Z
CNATRA	A through G	None

Note

Upon decommissioning, the identification letter will revert to CNO for future use.

B.1.1.3 Additional Identification Characters. Expansion of this system will be accomplished by assigning the numerals 2 through 9 as the first character in place of a letter.

B.1.1.4 Exceptions. The letters I and O are too easily confused with numerals and shall not be used.

B.1.1.5 Published Listing. Assigned visual identification letters/numbers are contained in the Naval Aeronautical Organization (OPNAV notice 5400).

B.1.1.6 Other Aircraft. Aircraft assigned to units other than those provided for above shall be identified by spelling out the name of the station or unit (i.e., NORFOLK, FORRESTAL, EL TORO, etc.).

B.1.2 Aircraft Side Numbers. Aircraft side numbers are assigned by force, wing, group, or squadron commanders, as appropriate. To achieve correlation between the electronic (IFF/SIF) and visual identification of each aircraft, combat and combat support aircraft shall be numbered using octal numbers (i.e., only the numerals 0 through 7).

B.1.2.1 Air Wings (CV) and Associated Squadrons. Appropriate commander shall use the following for selection of squadron aircraft identification side numbers and colors:

Squadron	Side Number	Color
1st VF Squadron	100 to 114	Insignia Red
2nd VF Squadron	200 to 214	Orange-Yellow
1st VFA Squadron	300 to 315	Light Blue
2nd VFA Squadron	400 to 415	International Orange
VA Squadron	500 to 512	Light Green
Tanker	513 to 517	
VAW	600 to 603	Insignia Blue
VAQ	620 to 624	Maroon
HS/HC	610 to 617	Magenta
VS Squadron	700 to 713	Dark Green

APPENDIX C

Selected Aviation Instructions

C.1 SELECTED AVIATION INSTRUCTIONS (LISTED IN NUMERICAL SEQUENCE)

NUMBER	SOURCE	TITLE
P1000.6F (NOTAL)	MCO	ACTS Manual
1000.16H (NOTAL)	OPNAV	Manual of Navy Total Force Manpower Policies and Procedures
1326.4A (NOTAL)	BUPERS	Administration of Enlisted Flight Orders
1500.2H (NOTAL)	OCEANCOM	Naval Meteorology and Oceanography Command Training and Certification Program
1500.62	BUPERS	Test Pilot Schools
1542.4A (NOTAL)	OPNAV	Naval Aviator/Flight Surgeon (NA/FS) Program
1650.29C	MCO	Aviation Awards
3130.6A	OPNAV	Naval Search & Rescue (SAR) Standardization Program
3140.14C (NOTAL)	OCEANCOM	Procedures Governing Flight Weather Briefings and Preparing DD Form 175-1 and U.S. Navy Flight Forecast Folder
P3500.14C (NOTAL)	MCO	Aviation Training and Readiness Manual Vol. 1
P3500.15B (NOTAL)	MCO	Aviation Training and Readiness Manual Vol. 2
P3500.16A (NOTAL)	MCO	Aviation Training and Readiness Manual Vol. 3
P3500.17 (NOTAL)	MCO	Aviation Training and Readiness Manual Vol. 4
3700.2B (NOTAL)	COMNAVAIRSYSCOM	Pilot/Aircrew Checkout Criteria in New Model Production Aircraft for COMNAVAIRSYSCOM RDT&E Aircraft Reporting Custodians
3710.1 (NOTAL)	BUMED	Anthropometric Compatibility Assignment Program NAV/NFO
3710.1C (NOTAL)	COMNAVAIRSYSCOM	Contractor's Flight Operations
3710.2E	OPNAV	Foreign Clearance Procedures for U.S. Naval Aircraft
3710.4	MCO	Waivers to DIFDEN
3710.8B	COMNAVAIRSYSCOM	Authority for Personnel To Pilot or Fly in Aircraft Under the Controlling Custody of NAVAIRSYS, Other Aircraft Used by NAVAIRSYS HQ Activities, and Preaccepted Aircraft

NUMBER	SOURCE	TITLE
5720.42E	SECNAV	Department of the Navy Freedom of Information Act (FOIA)
5720.44A (NOTAL)	SECNAV	Department of the Navy Public Affairs Policy and Regulations
5750.12E (NOTAL)	OPNAV	Command History
5800.7 (NOTAL)	JAG	Manual of the Judge Advocate General
5820.7B (NOTAL)	SECNAV	Cooperation with Civilian Law Enforcement Officials
6000.1A	OPNAV	Management of Pregnant Servicewomen
6110.1D	OPNAV	Physical Readiness Program
6320.94	SECNAV	Mental Health Evaluations of Members of the Armed Forces
6410.5A	BUMED	Medical Monitoring of Flight Personnel in Locations Where Officers With Aviation Medicine Training Are Not Available
6740.2 (NOTAL)	NAVMEDCOM	Required Procedures for the Use of Multiple Dose Vials (MDV)
7220.1A (NOTAL)	NMPC	Aviation Career Incentive Pay
11010.36A	OPNAV	Air Installations Compatible Use Zones (AICUZ) Program
13034.1	COMNAVAIRSYSCOM	Flight Clearance Procedures
00-80T-114	COMNAVAIRSYSCOM	Air Traffic Control Facilities Manual
PAYPERSMAN		
MILPERSMAN		
MANUAL OF THE MEDICAL DEPT.		

APPENDIX D

Total Mission Requirement Codes

D.1 NAVAL AIRCRAFT/SIMULATOR FLIGHT CLASSIFICATION SYSTEM

D.1.1 Primary Source. The TMR codes set forth in this appendix supersede the flight purpose codes (FPCs) of previous editions. TMR codes cover a full range of flight operations from training (including simulators) to combat. The TMR code is developed from a three-character code matrix with the first character representing the flight purpose, the second character representing the general purpose, and the third character representing the specific purpose. The definition of assigned TMR codes is outlined below. This instruction is the primary source of TMR codes and all personnel using these codes shall be made aware of the existence of this source. The naval aircraft flight record, OPNAV 3710/4, provides space to document as many as three missions and their associated times for one flight.

D.1.2 Deviation. No variations from the classifications specified herein are to be made without CNO approval.

D.2 APPLICABILITY OF THE TOTAL MISSION REQUIREMENT CODES

TMR codes apply to all flight personnel, aircraft, and approved simulators. They should reflect the primary purpose for the flight regardless of varying purposes particular individuals have for being aboard.

D.3 CLASSIFICATION OF TOTAL MISSION REQUIREMENT CODES

D.3.1 Purpose of Flight. The purpose of flight by naval aviators/naval aircraft or approved simulators shall be described by a three-character code in the following sequence:

a. The first position of the TMR is the FPC and denotes the type of operation.

(1) Training — Flights conducted for the purpose of training (both individual and as a crew) to maintain or improve the readiness of the activity to perform its assigned mission.

(2) Support Services — Flights conducted in support of an assigned mission including tests, logistics, search and rescue, troop transports, etc., either independently or as part of a squadron function.

(3) Operations — Navy flights conducted in support of operational tasking not specifically designated as contingency operations.

(4) FMF Operations — Marine flights conducted as part of an exercise while deployed with a battle group or task force.

(5) Contingency Flights — Flights conducted in support of contingency operations as delineated by the type commander.

(6) Combat Flights — Combat flights shall be used only for aircraft and by units specifically designated by competent authority as being in "combat status." This rule shall be strictly followed even though a combatant incident did occur or was likely to occur on the flight (i.e., fired upon by unfriendly forces, search for or detection of unfriendly submarine, flight over or near areas where it is prudent to anticipate hostile action against the aircraft, etc.).

(7) Exercise Flights — Flights conducted as part of an authorized fleet exercise as designated by the battle group or type commander.

b. The second position of the TMR is the GPC and denotes the general purpose of the flight. GPCs N and O will be used to document aborts and/or cancellations and may be used with FPCs 1 through 7.

(1) FPC 1 — only GPCs of A through I, P, or R can be used.

6 — Air combat — Intercept, fighter escort, air-to-air gunnery, etc.

7 — Attack — Surface targets; bomb, rocket, torpedo, etc.; non-ASW.

8 — Antisubmarine — Patrol, search, escort, attack, minelaying, etc.

9 — Special equipment — AEW, ECM, AMCM, photo, etc.

0 — Unsatisfactory syllabus.

D.5 GENERAL/SPECIFIC PURPOSE OF FLIGHT CODE COMBINATIONS J THROUGH R (SERVICE FLIGHTS)

D.5.1 SPCs To Be Used With GPCs J and K for Service Flights

J1 — Those ferry flights funded from the fleet ferry fund managed by the respective TYCOM. Reporting custodians shall ascertain from the controlling custodian under what circumstances the flight categories apply.

J2 — Those ferry flights funded from other sources (i.e., unit operating budgets, allotments, etc.).

K1 — Those functional checkflights funded from the fleet ferry fund managed by the respective TYCOM. Reporting custodians shall ascertain from the controlling custodian under what circumstances the flight categories apply.

K2 — Those functional checkflights funded from other sources (i.e., unit operating budgets, allotments, etc.).

K3 — Functional checkflight observer.

K4 — Bogey in support of other aircraft.

K5 — Bogey in support of ground units.

K6 — Bogey in support of ship operations.

K7 — Flying qualities or performance evaluation of aircraft.

K8 — Accelerated service test or propulsion system evaluation.

K9 — Navigation, weapons, or electronic warfare evaluation.

K0 — Carrier suitability or dynamic interface evaluation.

D.5.2 GPCs L, M, N, and O for Service Flights

a. Code L (Experimental/Evaluation) — Experimental, developmental, or evaluation flights of aircraft, its equipment, or an individual (i.e., NATOPS check).

L1 — Operational test and evaluation (OT&E).

L2 — Operational readiness inspection (ORI).

L3 — Instrument check.

L4 — NATOPS check.

L5 — Instructor standardization, test pilot training, or qualification evaluation.

L6 — Special weapons evaluation.

L7 — Ordnance separation, conventional, or nuclear weapon evaluation.

L8 — Drone support or target towing.

L9 — Aircraft or survival system evaluation.

L0 — Project support or other.

b. Code M (Logistics Support) — Use code M if flight is for the purpose of logistics support as follows:

M1 — MAG/CAG commitment: A logistics flight in support of the MAG/CAG.

M2 — MAW/functional wing commitment: A logistics flight scheduled for support of the wing.

M3 — NAS/MCAS commitment: A logistics flight in support of the air station.

M4 — FMF/CINC commitment: Flights flown in support of FMF/CINC units.

M5 — CMC/CNO commitment: Flights flown in support of CMC/CNO schools or units.

Q6 — Noncombat, nontraining air refueling flights.

Q7 — AEW flights (carrier-based or land-based) in support of either fleet tactical exercises or fleet operations.

Q8 — Pathfinder flights.

Q9 — Drug interdiction flights.

D.5.5 SPCs Used With GPC R. SPCs to be used with GPC R for transport/troop support are as follows:

a. Logistics transport flights include transportation of military or civilian personnel (other than at points of contact with enemy or in training exercises) as incident to change in location of duty or civil employment or to the transfer of entire units as well as transport of cargo or mail (including guard mail with or without couriers) for other than troop support purposes. If the flight is required for any of the foregoing uses, it is a logistics transport flight even if it also served an administrative transport purpose.

R1 — Regularly scheduled flight for the purpose of transporting cargo, personnel (except hospitalized patients), or mail, as set forth above, whether anything was transported or not.

R2 — Special flight, not regularly scheduled, to transport cargo, personnel (except hospitalized patients), or mail, as set forth above.

b. Administrative transport flights include transportation of military or civilian personnel for inspection, conference, instruction, or other official business involving no PCS, and for other authorized purposes of a similar nature, whether or not under travel or temporary duty orders.

R3 — Special flight, not regularly scheduled, to provide administrative transport for the pilot or other persons aboard, and that would not be made were it not for the administrative purpose alone.

c. Troop support flights include transportation of troops and other personnel (including battle casualties) to or from points of contact with enemy as well as rescue of personnel or transport of liaison personnel to or from engaged units. Transport of cargo under equivalent circumstances also falls in this specific purpose category.

R4 — Troop lift into, out of, or over an area where enemy fire is received or can reasonably be expected.

R5 — Liaison flight into, out of, or over an area where enemy fire is received or can reasonably be expected.

R6 — Logistics flight into, out of, or over an area where enemy fire is received or can reasonably be expected.

D.6 GENERAL/SPECIFIC PURPOSE OF FLIGHT CODE COMBINATIONS S THROUGH Z (COMBAT FLIGHTS)

a. GPCs S through Z will be used with FPCs 3 through 7 (noted in paragraph D.3). When in "combat status," FPC 6 will be used with GPCs S through Z and will be the only TMR code entered for the flight.

b. SPCs to be used with GPC S for attacks on ground or surface targets designated by air support control:

S1 — Targets assigned before takeoff.

S2 — Targets assigned after takeoff.

S3 — Provision of illumination for attack of targets.

S9 — Escort or cover for above (VF or VA not assigned to attack).

c. SPCs to be used with GPC T for attacks on ground or surface targets (excluding submarine and aircraft) not designated by air support control:

T1 — Targets assigned before takeoff.

T2 — Targets of opportunity: "armed reconnaissance."

T3 — Provision of illumination for attack of targets.

T4 — Flak suppression.

T5 — Surface-to-air missile suppression.

T6 — Minelaying (all types).

T7 — Aerial refueling tanker supporting combat operations.

D.7 CURRENTLY ASSIGNED TOTAL MISSION REQUIREMENT CODES

The currently assigned TMR codes are listed below with the description that will be displayed on the NAVFLIRS monthly reports.

TMR CODE	DESCRIPTION
1A1	TRNG SYL/EXC F/F/N
1A2	TRNG SYL/EXC INST
1A3	TRNG SYL/EXC FCLP/CAL
1A4	TRNG SYL/EXC CQ
1A5	TRNG SYL/EXC TRANS
1A6	TRNG SYL/EXC AIR CMBT
1A7	TRNG SYL/EXC ATCK
1A8	TRNG SYL/EXC ASW
1A9	TRNG SYL/EXC SP EQUIP
1A0	TRNG SYL/EXC UNSAT FLT
1B1	TRNG IUT F/F/N
1B2	TRNG IUT INST
1B3	TRNG IUT FCLP/CAL
1B4	TRNG IUT CQ
1B5	TRNG IUT TRANS
1B6	TRNG IUT AIR CMBT
1B7	TRNG IUT ATCK
1B8	TRNG IUT ASW
1B9	TRNG IUT SP EQUIP
1B0	TRNG IUT UNSAT FLT
1C1	TRNG NAV F/F/N
1C2	TRNG NAV INST
1C3	TRNG NAV FCLP/CAL
1C4	TRNG NAV CQ
1C5	TRNG NAV TRANS
1C6	TRNG NAV AIR CMBT
1C7	TRNG NAV ATCK
1C8	TRNG NAV ASW
1C9	TRNG NAV SP EQUIP
1C0	TRNG NAV UNSAT FLT
1D1	TRNG STU/AV F/F/N
1D2	TRNG STU/AV INST
1D3	TRNG STU/AV FCLP/CAL
1D4	TRNG STU/AV CQ
1D5	TRNG STU/AV TRANS
1D6	TRNG STU/AV AIR CMBT
1D7	TRNG STU/AV ATCK
1D8	TRNG STU/AV ASW
1D9	TRNG STU/AV SP EQUIP
1D0	TRNG STU/AV UNSAT FLT
1E1	TRNG NAV REF SYL F/F/N
1E2	TRNG NAV REF SYL INST
1E3	TRNG NAV REF SYL FCLP/CAL
1E4	TRNG NAV REF SYL CQ
1E5	TRNG NAV REF SYL TRANS
1E6	TRNG NAV REF SYL AIR CMBT
1E7	TRNG NAV REF SYL ATCK
1E8	TRNG NAV REF SYL ASW
1E9	TRNG NAV REF SYL SP EQUIP
1E0	TRNG NAV REF SYL UNSAT FLT
1F1	TRNG NAV N-SYL F/F/N
1F2	TRNG NAV N-SYL INST
1F3	TRNG NAV N-SYL FCLP/CAL
1F4	TRNG NAV N-SYL CQ
1F5	TRNG NAV N-SYL TRANS
1F6	TRNG NAV N-SYL AIR CMBT
1F7	TRNG NAV N-SYL ATCK
1F8	TRNG NAV N-SYL ASW
1F9	TRNG NAV N-SYL SP EQUIP
1F0	TRNG NAV N-SYL UNSAT FLT
1G1	TRNG NFO N-SYL F/F/N
1G2	TRNG NFO N-SYL INST
1G3	TRNG NFO N-SYL FCLP/CAL
1G4	TRNG NFO N-SYL CQ
1G5	TRNG NFO N-SYL TRANS
1G6	TRNG NFO N-SYL AIR CMBT
1G7	TRNG NFO N-SYL ATCK
1G8	TRNG NFO N-SYL ASW
1G9	TRNG NFO N-SYL SP EQUIP
1G0	TRNG NFO N-SYL UNSAT FLT
1H1	TRNG OT US MIL F/F/N
1H2	TRNG OT US MIL INST
1H3	TRNG OT US MIL FCLP/CAL
1H4	TRNG OT US MIL CQ
1H5	TRNG OT US MIL TRANS
1H6	TRNG OT US MIL AIR CMBT
1H7	TRNG OT US MIL ATCK
1H8	TRNG OT US MIL ASW
1H9	TRNG OT US MIL SP EQUIP
1H0	TRNG OT US MIL UNSAT FLT
1I1	TRNG FRGN F/F/N

TMR CODE	DESCRIPTION
2O6	SUPT C/A OPS AIR SPACE
2O7	SUPT C/A OPS NO CREW
2O8	SUPT C/A OPS ACCIDENT
2O9	SUPT C/A OPS PROJECTS
2P1	SUPT SAR/WATER MIL SUPT
2P2	SUPT SAR/LAND MIL SUPT
2P3	SUPT SAR/WATER N-DOD
2P4	SUPT SAR/LAND N-DOD
2P5	SUPT SAR/MEDEVAC MIL SUPT
2P6	SUPT SAR/MEDEVAC N-DOD
2P7	SUPT SAR/MEDEVAC LAND CMBT
2P8	SUPT SAR/WATER CMBT
2P9	SUPT SAR/LAND CMBT
2P0	SUPT SAR TRNG
2Q1	SUPT MISC AEROLOGICAL
2Q2	SUPT MISC N-CMBT PAT
2Q3	SUPT MISC N-CMBT PH/RD MAP
2Q4	SUPT MISC AIR SHOW/DEMO
2Q5	SUPT MISC N-CMBT/TRNG
2Q6	SUPT MISC N-CMBT REFUEL
2Q7	SUPT MISC AEW TACT OPS
2Q8	SUPT MISC PATHFINDER
2Q9	SUPT MISC DRUG RUN
2R1	SUPT TRANS TRP SCH
2R2	SUPT TRANS TRP N-SCH
2R3	SUPT TRANS TRP N-SCH ADMIN
2R4	SUPT TRANS TRP IN/OUT CMBT
2R5	SUPT TRANS LSN IN/OUT CMBT
2R6	SUPT TRANS LOG IN/OUT CMBT
3N1	BGO C/A MAINT ENG/FUEL
3N2	BGO C/A MAINT HYD/FRAME
3N3	BGO C/A MAINT RADIOS
3N4	BGO C/A MAINT NAVAID
3N5	BGO C/A MAINT RAD/SYS
3N6	BGO C/A MAINT ELEC/INST
3N7	BGO C/A MAINT ORDNANCE
3N8	BGO C/A MAINT WGMAN DOWN
3N9	BGO C/A MAINT SUPT EQUIP
3N0	BGO C/A MAINT SAFETY
3O1	BGO C/A OPS WEATHER
3O2	BGO C/A OPS HIGHER AUTH
3O3	BGO C/A OPS SUPT UNIT
3O4	BGO C/A OPS NO TGT

TMR CODE	DESCRIPTION
3O5	BGO C/A OPS FAC DOWN
3O6	BGO C/A OPS AIR SPACE
3O7	BGO C/A OPS NO CREW
3O8	BGO C/A OPS ACCIDENT
3S1	BGO DES GND ATCK BEF T/O
3S2	BGO DES GND ATCK AFT T/O
3S3	BGO DES ILLUM TGT
3S9	BGO DES ESC/COV NO ATCK
3T1	BGO N-DES GND ATCK BEF T/O
3T2	BGO N-DES TGT OPP RECON
3T3	BGO N-DES ILLUM TGT
3T4	BGO N-DES FLACK SUPPRESS
3T5	BGO N-DES MISSILE SUPPRESS
3T6	BGO N-DES MINELAYING
3T7	BGO N-DES REFUEL CMBT OPS
3T8	BGO N-DES ECM SUPT GND TGT
3T9	BGO N-DES ESC/COV NO ATCK
3U1	BGO AWO FIGHTER SWEEPS
3U2	BGO AWO CMBT AIR PAT
3U3	BGO AWO DEF DIVER/DECEPT
3U4	BGO AWO ECM SUPT FROM ACFT
3U5	BGO AWO AMCM NEUT/ SWEEP
3U8	BGO AWO ESC USAF BOMBERS
3U9	BGO AWO ESC/COV TRANS
3V1	BGO RECON PHOTO
3V2	BGO RECON RAD/ECM
3V3	BGO RECON GUNFIRE SPOT
3V4	BGO RECON AMCM SEARCH
3V9	BGO RECON ESC/COV ACFT
3W1	BGO DEF HOME AEW/CIC
3W2	BGO DEF HOME CMBT AIR CONT
3W7	BGO DEF HOME INTERCEPT
3X1	BGO DEF OT AEW/CIC
3X2	BGO DEF OT PROT RAD ACFT
3X7	BGO DEF OT INTERCEPT
3Y1	BGO OFF ASW ROUT SEARCH
3Y2	BGO OFF ASW BARRIER PAT
3Y3	BGO OFF ASW OFF SEARCH
3Y4	BGO OFF ASW HOLD DOWN SUB

TMR CODE	DESCRIPTION
5S3	CONT DES ILLUM TGT
5S9	CONT DES ESC/COV NO ATC
5T1	CONT N-DES ATCK BEF T/O
5T2	CONT N-DES TGT OPP RECON
5T3	CONT N-DES ILLUM TGT
5T4	CONT N-DES FLACK SUPPRESS
5T5	CONT N-DES MISSILE SUPPRESS
5T6	CONT N-DES MINELAYING
5T7	CONT N-DES REFUEL CMBT OPS
5T8	CONT N-DES ECM SUPT TGT
5T9	CONT N-DES ESC/COV NO ATCK
5U1	CONT AWO FIGHTER SWEEPS
5U2	CONT AWO CMBT AIR PAT
5U3	CONT AWO DEF DIVER/ DECEPT
5U4	CONT AWO ECM SUPT ACFT
5U5	CONT AWO AMCM NEUT/ SWEEP
5U8	CONT AWO ESC USAF BOMBERS
5U9	CONT AWO ESC/COV TRANS
5V1	CONT RECON PHOTO
5V2	CONT RECON RAD/ECM
5V3	CONT RECON GUNFIRE SPOT
5V4	CONT RECON AMCM SEARCH
5V9	CONT RECON ESC/COV ACFT
5W1	CONT DEF HOME AEW/CIC
5W2	CONT DEF HOME CMBT AIR CON
5W7	CONT DEF HOME INTERCEP
5X1	CONT DEF OT AEW/CIC
5X2	CONT DEF OT PROT RAD ACFT
5X7	CONT DEF OT INTERCEPT
5Y1	CONT OFF ASW ROUT SEARCH
5Y2	CONT OFF ASW BARRIER PAT
5Y3	CONT OFF ASW OFF SEARCH
5Y4	CONT OFF ASW HOLD DOWN SUB
5Y5	CONT OFF ASW ATTACK SUB
5Y6	CONT OFF ASW LOC/ATCK SUB
5Y9	CONT OFF ASW ATCK SUB FAC
5Z1	CONT DEF ASW PROT FORCE
5Z2	CONT DEF ASW ESC SHIPS
5Z4	CONT DEF ASW DEF HARBOR

TMR CODE	DESCRIPTION
6N1	CMBT C/A MAINT ENG/FUEL
6N2	CMBT C/A MAINT HYD/FRAME
6N3	CMBT C/A MAINT RADIOS
6N4	CMBT C/A MAINT NAVAID
6N5	CMBT C/A MAINT RAD/SYS
6N6	CMBT C/A MAINT ELEC/INST
6N7	CMBT C/A MAINT ORDNANCE
6N8	CMBT C/A MAINT WGMAN DOWN
6N9	CMBT C/A MAINT SUPT EQUIP
6N0	CMBT C/A MAINT SAFETY
6O1	CMBT C/A OPS WEATHER
6O2	CMBT C/A OPS HIGHER AUTH
6O3	CMBT C/A OPS SUPT UNIT
6O4	CMBT C/A OPS NO TGT
6O5	CMBT C/A OPS FAC DOWN
6O6	CMBT C/A OPS AIR SPACE
6O7	CMBT C/A OPS NO CREW
6O8	CMBT C/A OPS ACCIDENT
6S1	CMBT DES GND ATCK BEF T/O
6S2	CMBT DES GND ATCK AFT T/O
6S3	CMBT DES ILLUM TGT
6S9	CMBT DES ESC/COV NO ATCK
6T1	CMBT N-DES ATCK BEF T/O
6T2	CMBT N-DES TGT OPP RECON
6T3	CMBT N-DES ILLUM TGT
6T4	CMBT N-DES FLACK SUPPRESS
6T5	CMBT N-DES MISSILE SUPPRES
6T6	CMBT N-DES MINELAYING
6T7	CMBT N-DES REFUEL CMBT OPS
6T8	CMBT N-DES ECM SUPT TGT
6T9	CMBT N-DES ESC/COV NO ATCK
6U1	CMBT AWO FIGHTER SWEEPS
6U2	CMBT AWO AIR PAT
6U3	CMBT AWO DEF DIVER/ DECEPT
6U4	CMBT AWO ECM SUPT
6U5	CMBT AWO AMCM NEUT/ SWEEP
6U8	CMBT AWO ESC USAF BOMBERS
6U9	CMBT AWO ESC/COV TRANS
6V1	CMBT RECON PHOTO

APPENDIX E

Aviation Physiology and Water Survival Requirements

	LECTURES						DEVICES			
	Aviation Physiology	Stress and Human Performance	Sensory Physiology	Emergency Egress Systems	Aviation Life Support Systems	Survival (Self-Aid) First-Aid	Low-Pressure Chamber	Disorientation Demonstrator	Centrifuge Trainer	Ejection Seat
Initial Physiology	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**
NP1 Initial	X	X	X	X	X	6	X	7		4
NP2 Initial	X	X	X	X	X	X	X			4
NP3 Selected Passenger	X	X	X	X	X	X	X			4
NP4 Project Specialist	X		X	X	X					
NP5 CFET		X							X	
NP6 Special Operations Personnel	X	X					X			
NP7 Midshipmen	X		X	X	X		1			4
NP8 VIPs	X		X	X	X		1			4
Refresher Physiology	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**
RP1 Ejection Seat	X	X	X	X	X	X	X			X
RP2 Nonejection Seat Pressurized	X	X	X	X	X	X	X			
RP3 Nonpressurized	X	X	X	X	X	X	3			
RP4 Project Specialist	X		X	X	X					
RP5 Civilian Aircrew	X	X	X	X	X	X	5			4
RP6 Special Operations Personnel	X	X					X			
RP7 Selected Passenger	X	X	X	X	X	X	X			4

Figure E-1. Naval Aviation Physiology Training Program Requirements (Sheet 1 of 4)

TRAINING DEVICES

G **Low-Pressure Chamber (LPC) Brief/Flight.** Where available/applicable, low-pressure chamber is utilized to reinforce classroom training on the principles of effects of altitude on the human body. Note: Rapid decompression chamber flights are available upon TYCOM request.

H **Multistation Disorientation Demonstrator.** The device is available only at NAS Pensacola. The training device is utilized to demonstrate visual and vestibular phenomena.

I **Centrifuge Training.** Where available/applicable, a centrifuge is utilized to enhance g tolerance/ operational readiness and reinforce classroom presentation on the effects of acceleration (GLOC) covered in "Stress in Naval Aviation" lecture. Aircrews demonstrate ability to properly perform anti-g straining maneuver under acceleration forces designed to stimulate g forces in flight.

J **Ejection Seat Trainer.** Where available/applicable, an ejection seat trainer is utilized to reinforce the aeromedical aspects of ejection covered in "Emergency Egress Systems" lecture. Aircrews demonstrate ability to assume proper body position and initiate ejection. Refresher students will receive at least static ejection seat training. Dynamic ejection seat training is highly encouraged and is available upon request of the air crewman during the refresher NAPTP training.

Figure E-1. Naval Aviation Physiology Training Program Requirements (Sheet 3 of 4)

A. Physiology Topics

1. Aviation Physiology
2. Noise and Vibration
3. G-Induced Loss of Consciousness and G-Tolerance Improvement
4. Chemical Warfare
5. Biological Warfare
6. Radiological Warfare
7. Exercise
8. Cardiovascular Fitness
9. Strength Training
10. Nutrition/Weight Control
11. Hypothermia
12. Heat Stress
13. Self-Imposed Stress
14. Drugs
    a. Self Medication
    b. "Illegal" Drugs
    c. Performance Enhancement
    d. Stimulants
15. Alcohol
16. Fatigue
17. Survival/Combat First Aid
18. 3710.7 (Chapter 8)

B. Sensory Physiology

1. Vision
2. Disorientation/Misorientation (Types)
3. Visual Illusions/Problems
4. Vestibular Illusions
5. Night Vision Environment
6. Night Vision Goggles
7. Lasers/Laser Protection
8. Midair Collision Avoidance (Aeromedical Factors)
9. Motion Sickness
10. Simulator Sickness
11. Visual Scanning/Blindspots
12. Target Fixation
13. Induced Myopia (Night and Empty Field)
14. Visual Overload

C. Psychology/Stress

1. Stress
2. Stress Management
3. Low-Level Human Factors of Flight
    a. NOE
    b. TEAF
4. Temporal Distortion/Time Distortion
5. Situational Awareness
6. Anomalies of Attention/Complacency
7. Self Hypnosis (Performance Awareness)
8. Crew Coordination
9. Cockpit Resource Management
10. Task Saturation
11. Learning
12. Memory Improvement
13. Circadian Rhythms/Long Duration Flights/Fatigue
14. Human Factors (General)

D. Emergency Egress/Survival/Survival Equipment

1. Aeromedical Aspects of Ejection
2. Psychology of Delayed Ejection
3. Emergency Egress/Ground Egress
4. Search/Rescue/Survival
5. Aviation Life Support Systems (ALSS)
6. Parachuting Techniques
7. Ditching/Crash Landing
8. Land Survival
9. Water Survival
10. Impact/Acceleration/Survivability
11. Escape and Evasion

E. Specialized/Deployment Briefs

1. Surg Op/Combat Stress
2. Motor Vehicle Human Factors
3. AMSO/Flight Surgeon Roles
4. Predeployment Syndrome
5. Jungle Survival
6. Mountain Survival
7. Desert Survival
8. Arctic Survival

NOTES:

1. Many of the above topics are interrelated and hence could be/have been listed in more than one area.
2. This list is not exhaustive. Aviation physiologists, aeromedical safety officers, aviation psychologists, aviation optometrists, and flight surgeons may be able to speak on any number of other topics.

Figure E-2. Adjunctive Training/Physiological Threat Briefs

ACTIVITY DUTY SITES	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	R1	R2	R3
NAS BARBERS POINT (1)			Q	Q	Q		Q	Q	Q	Q	Q	Q	Q
NAS BRUNSWICK (2)			Q	Q	CQ			Q				CQ	CQ
MCAS CHERRY POINT (2)			Q	Q	Q			Q	Q	Q	Q	Q	Q
NAS CORPUS CHRISTI (2)			Q	Q	CQ			Q			CQ	CQ	CQ
MCAS EL TORO			Q	Q	Q		Q	Q	Q	Q	Q	Q	Q
NAS JACKSONVILLE			Q	Q	Q		Q	Q	Q	Q	Q	Q	Q
NAS LEMOORE			Q	Q	Q		Q	Q	Q	Q	Q	Q	Q
NAS MIRAMAR			Q	Q	Q		Q	Q	Q	Q	Q	Q	Q
NAS NORFOLK			Q	Q	Q		Q	Q	Q	Q	Q	Q	Q
NAS PATUXENT RIVER (2)			Q	Q	CQ			Q			CQ	CQ	CQ
NAS PENSACOLA	Q		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
NETSAFA PENSACOLA		Q			Q			Q					
NAS WHIDBEY ISLAND (4)			Q	Q	CQ		Q	Q			Q	Q	Q
OKINAWA, JAPAN (CG 1ST MAW)			Q	Q	Q		Q	Q	Q	Q	Q	Q	Q
RESERVE SITES	**N1**	**N2**	**N3**	**N4**	**N5**	**N6**	**N7**	**N8**	**N9**	**N10**	**R1**	**R2**	**R3**
NAVAIRES NEW ORLEANS			Q	Q	CQ			Q			Q	Q	Q
NAVAIRES SANTA CLARA			Q	Q	CQ			Q			Q	Q	Q
NAVAIRES WILLOW GROVE			Q	Q	CQ			Q			Q	Q	Q

Q — NAWSTP SITES ARE AUTHORIZED TO GRANT A GRADE OF QUALIFIED IN A PARTICULAR CURRICULUM.

CQ — NAWSTP SITES ARE AUTHORIZED TO GRANT A GRADE OF CONDITIONALLY QUALIFIED IN A PARTICULAR CURRICULUM.

NOTE:

(1) PERSONNEL RECEIVING NAWSTP TRAINING (N5, R1, R2, OR R3) OUTSIDE THE CONTINENTAL U.S. (OUTCONUS) TRAINING ACTIVITIES SHALL COMPLETE THE ENTIRE APPROPRIATE REFRESHER TRAINING COURSE (LECTURES, SWIM, AND DEVICES) WITHIN 90 DAYS AFTER RETURNING TO CONUS, IF ORDERED TO DUTY IN A FLYING BILLET.

(2) ACTIVE DUTY CONUS SITES WITHOUT DEVICES SHALL ONLY BE AUTHORIZED TO GRANT A GRADE OF CQ FOR N5, R1, R2, AND R3 CURRICULA. THEY MAY GRANT A GRADE OF Q FOR RESERVE PERSONNEL OPERATING UNDER THE CONTROL OF COMNAVAIRESFOR FOR R1, R2, AND R3.

(3) ACTIVE DUTY USN PERSONNEL SHALL COMPLETE APPROPRIATE DEVICE TRAINING.

(4) 9E8 USED INSTEAD OF 9D5 FOR REFRESHER TRAINING ONLY.

Figure E-4. Naval Aviation Water Survival Training Program Sites and Curriculum

A — NAWSTP OVERVIEW. Classroom presentation on the content and requirements of the Naval Aviation Water Survival Training Program. During this period, the students will also complete medical screening questionnaires and be briefed on the Drop on Request and Training Time Out policies.

B — DROWNPROOFING, BACKSTROKE, BREASTSTROKE.* Swimming instruction and pool practice of the fundamentals of these survival swimming techniques/strokes. GRADED ELEMENT — Skill must conform to standards specified in NAWSTP curriculum and CNET P1552/16.

C — SIDESTROKE AND AMERICAN CRAWL.* Swimming instruction and pool practice of the fundamentals of these two survival strokes. GRADED ELEMENTS — Skills must conform to standards specified in NAWSTP curriculum and CNET P1552/16.

D — SURFACE DIVE, UNDERWATER SWIMMING, ABANDON SHIP DRILL, AND TREADING WATER.* Swimming instruction and pool practice of the fundamentals of these survival swimming techniques. GRADED ELEMENT — Skills must conform to standards specified in NAWSTP curriculum and CNET P1552/16.

E — SURVIVAL CONFIDENCE AND ENDURANCE SWIM.* Swimming pool exercise requiring the student to swim approximately 1 mile while wearing a flight suit. GRADED ELEMENT. — Time requirement to swim the distance is 80 minutes or less.

F — SURFACE DEBRIS/BURNING OIL SWIM. Swimming instruction and pool practice of these survival swimming techniques.

J — EQUIPMENT AND PROCEDURES. Classroom instruction on aviation life support equipment and procedures for use.

K — RAFTS AND CONTENTS. Classroom presentation on single-place and multiplace liferafts used in naval aviation.

L — SIGNAL AND RESCUE DEVICES. Classroom instruction on the operating characteristics and use of signal and rescue devices. During N1, actual experience required, optional in other curricula.

M1 — FLIGHT EQUIPMENT SWIM.* Wearing flight equipment required by NAVAIR 13-1-6 series manual, swim 75 yards using three survival swim strokes (breaststroke, sidestroke, and backstroke). Initial (N1, N2, N3, N5, N8) requirement is 25 yards each stroke. Refresher requirement (R1, R2, R3) is 15 yards each stroke, completing the final 30 yards using any combination of the strokes desired. Form is not a critical element when evaluating either initial or refresher students. For other courses (N4, N8, N9, N10), contact a training site for requirements. GRADED ELEMENT — Completion of the 75-yard distance without using the pool bottom or sides for support.

M2 — FLIGHT EQUIPMENT TREADING WATER/DOWNPROOFING.* Treading water/downproofing/inflation exercise for a total of 10 continuous minutes in NATOPS-required flight gear. Initial (N1, N2, N3, N5, N8) and refresher (R1, R2, R3) requirements — Demonstrate treading water (first 2 minutes) and downproofing (next 2 minutes). During the final 6 minutes (more time may be allotted for personnel who are performing the skills at a slower pace), orally inflate the left side of the life preserver unit (LPU), manually activate the CO_2 cartridge in the right side of the LPU, assume the H.E.L.P. and HUDDLE positions, and perform an eyes closed survival vest equipment location drill. GRADED ELEMENT — Completion of the 4-minute treading water/downproofing exercise without using the pool bottom or side for support. The remaining 6 minutes is participation-based only, however, the student must complete this module of training. Treading water and downproofing skills for all initial students will conform to the standards of CNET P1552/16.

N1 — MULTIPLACE AIRCRAFT UNDERWATER EGRESS.* Classroom presentation and practical experience in procedures for underwater escape from multiplace aircraft. COG 2"0" Device 9D5 used for dynamic training. GRADED ELEMENT — All rides must be completed without assistance from safety divers or releasing restraint while device is still in motion.

Figure E-5. Naval Aviation Water Survival Training Requirements (Sheet 2 of 3)

R1		R2	R3	
A-4	F-14	C-2	H-1	T-39
A-6	F-16	P-3	H-2	C-12
EA-6	F/A-18	T-34	H-3	T-44
AV-8	S-3	C-130	H-46	C-9
T-38	T-2		H-53	TC-4
F-5	E-2		H-57	C-20
	T-45		H-60	E-6
			T-47A	V-22

Figure E-6. NAWSTP Refresher Training Curriculum Breakdown by Category of Aircraft

Appendix F

Exception, Special Qualification, Service, Landing, and Approach Codes

F.1 EXCEPTION CODES

C — Correction to previously submitted data other than RECTYP 7D.

D — Deletion of previously submitted data other than RECTYP 7D.

E — Documenting flights when the crewmember and the aircraft are assigned to different organizations (RECTYP 7C only).

G — Gaining a crewmember to the squadron data base (RECTYP 7D only).

L — Losing a crewmember from the squadron data base (RECTYP 7D only).

R — Revision to crewmember personnel data residing on the squadron data base (RECTYP 7D only).

S — Documenting staff member flight time. Indicates an individual assigned to an approved DIFOPS billet on a CVW staff only. All other staff crewmembers shall use an exception code E when flying in aircraft assigned to a different organization than the one to which the staff crewmember is assigned (RECTYP 7C only).

T — Documenting simulator time. Simulator time only refers to approved simulators capable of logging flight time (RECTYP 7C only).

X — Documenting a canceled flight. A canceled flight is one for which no flight time is obtained (RECTYP 7B only).

F.2 SPECIAL QUALIFICATION CODES

A — ACFT CMDR — That individual designated as a qualified aircraft commander in the aircraft model being flown, serving as pilot in command (pilot assigned responsibility for the safe and orderly conduct of the flight).

B — OBSERVER — Performs in-flight duties as an observer and not actively engaged in the performance of the flight.

C — COPILOT — An assistant pilot or instructor who is positioned with access to the flight controls or is providing instruction to the pilot exercising principal active control of the aircraft. The copilot designation does not change even though the copilot may exercise principal control of the aircraft.

D — SAR CREWMAN — Performs emergency medical care functions assigned in support of search and rescue missions.

E — ECM — Performs in-flight duties related to electronic countermeasures.

F — FLIGHT ENGINEER/CREWCHIEF — Performs in-flight duties as a flight engineer. Is knowledgeable of all aircraft systems, emergency procedures, and flight equipment. Troubleshoots and repairs discrepant aircraft systems.

G — FLT ATTENDANT — Performs in-flight duties as a flight attendant dealing with passenger handling requirements, safety procedures, and equipment.

H — FLT SURGEON — That individual designated as a flight surgeon. This individual may collect FPT or CPT as defined in Chapter 11 if all specified conditions are met.

I — INSTRUCTOR — Performs in-flight duties as an instructor or evaluator of other aeronautically designated personnel during the flight.

J — SENSOR OPERATOR — Performs in-flight duties as a sonar, acoustic, or nonacoustic operator.

F.4 LANDING CODE

TYPE	DAY	NIGHT
Ship Arrest/RAST	1	A
Ship Touch and Go	2	B
Ship Bolter/RAST Free Deck	3	C
Ship Helicopter/Clear Deck	4	D
NVD (SHIP)	—	N
NFO	Y	Z
FCLP	5	E
Field/Field Touch and Go	6	F
Field Arrest	7	G
VSTOL Slow	8	H
VSTOL Vertical	9	J
VSTOL Vertical Roll	0	K
NVD (LAND)	—	P

F.5 APPROACH CODE

Note

The approach is actual if actual instrument conditions (as defined in paragraph 1.3) are encountered below 1,000 feet above airport/ flight deck elevation during the approach. The approach is simulated if flown in accordance with the criteria set forth in paragraph 1.3 under simulated aircraft conditions.

CATEGORY	ACTUAL INSTRUMENT (ACT)	SIMULATED INSTRUMENT (SIM)
Precision	1	A
Nonprecision	2	B
Auto	3	C

a. Precision

(1) ALS — Automatic landing system (includes SPN-10, SPN-42, etc., mode I or IA).

(2) ILS — Instrument landing system (includes SPN-10, SPN-42, etc., mode II).

(3) PAR — Precision approach radar (includes SPN-10, SPN-42, etc., mode III).

b. Nonprecision

(1) VOR—VHF omni range.

(2) VOR/DME — VOR/distance measuring equipment.

(3) Tacan — UHF tactical air navigation aid.

(4) NDB (ADF) — Nondirectional beacon (automatic direction finder).

(5) L/MF range.

(6) Localizer.

(7) ASR — Airport surveillance radar (includes CCA when no glidepath information is provided).

(8) ELVA (helicopter only) — Emergency low visibility approach. Controlled by ASAC utilizing ship controlled radar.

(9) SCA — Self-contained approach controlled by operator using onboard radar.

c. Auto

(1) Coupled/automatic hover system approaches after official sunset or during actual instrument conditions in automatic or alternate modes will utilize 3. Simulated instrument conditions in automatic or alternate modes will utilize C.

APPENDIX G

Time Zone, System Status, Passenger Priority, and Opportune Cargo Codes

G.1 TIME ZONE CODES

a. Time zone codes are referenced to Greenwich Mean Time (GMT): solar time of the meridian at Greenwich, England, used as the basis for standard time throughout the world.

b. COMPUTE TIME in the Western hemisphere from local zones to GMT as follows:

ZONE	ADD	HOUR(S)
N	+	1
O	+	2
P	+	3
Q	+	4
R	+	5
S	+	6
T	+	7
U	+	8
V	+	9
W	+	10
X	+	11
Y	+	12

c. Compute time in the Eastern hemisphere from local zones to GMT as follows:

ZONE	MINUS	HOUR(S)
A	-	1
B	-	2
C	-	3
D	-	4
E	-	5
F	-	6
G	-	7
H	-	8
I	-	9
K	-	10
L	-	11
M	-	12

Note

The time zone for either the Eastern or Western hemisphere remains unchanged, even during daylight savings time.

G.2 SYSTEM STATUS CODES

a. F — Full systems from takeoff to landing.

b. P — Full systems at takeoff; not full systems at landing.

c. N — None/partial systems from takeoff to landing.

G.3 PASSENGER PRIORITY CODES

a. Priority 1 (PRI1) — Emergency airlift in direct support of operational forces or for lifesaving purposes.

b. Priority 2 (PRI2) — Official business airlift of personnel with scheduling constraints that cannot be satisfied by any other mode of travel.

c. Priority 3 (PRI3) — Other official business airlift of passengers that requires the carrying of classified material for mission accomplishment that cannot be accommodated by mail or the Armed Forces Courier Services.

d. Priority 4 (PRI4) — Official business airlift involving group or team travel that requires the conduct of official business while en route that maintains the integrity of cohesiveness of the group and that cannot be reasonably satisfied by other modes of travel.

e. Priority 5 (PRI5) — Any other official business airlift that can be shown to be less expensive than any other mode of travel to satisfy scheduling constraints. Requests carrying this priority shall be supported only when cost effective.

APPENDIX H

Weapons Proficiency Codes

H.1 ORDNANCE CODES

Below are the ordnance types and codes required for the weapons proficiency subsystem:

ORDNANCE	ORDNANCE CODE
B43	B43
B43 Retarded	B43A
B57	B57
B57 Retarded	B57A
B61	B61
B61 Retarded	B61A
Mk-81 FF	B81
Mk-81 SE	B81A
Mk-82 FF	B82
Mk-82 SE	B82A
Mk-83 FF	B83
Mk-84 FF	B84
BDU-8	BD1
BDU-8 Retarded	BD1A
BDU-12	BD2
BDU-12 Retarded	BD2A
BDU-20	BD3
BDU-20 Retarded	BD3A
BDU-24	BD4
BDU-24 Retarded	BD4A
BDU-33	BD5
BDU-33 Retarded	BD5A
BDU-36	BD6
BDU-36 Retarded	BD6A
BDU-45	BD7
BDU-45 Retarded	BD7A
BDU-48	BD8
BDU-48 Retarded	BD8A
Mk-20 Rockeye	C20
CBU-55 FAE	C55
CBU-59 APAM	C59
CBU-72 Napalm	C72
Mk-82 Gator	C78
CBU-88 Smokeye	C88
RR-129 Chaff	CH1
Speedbrake Chaff	CH2
Pod Chaff	CH3
Chaffeye	CH4
RR-144	CH5
AIRBOC	CH6
Mk-36 Destructor	D36
Mk-40 Destructor	D40
Mk-41 Destructor	D41
Mk-45 Flare (SUU-44 Dispenser)	F1
Mk-46 Decoy Flare	F2
Aviation Parachute Flare	F3
Mk-25 Marine Smoke Marker	F10
Mk-12 Smoke Tank	F11
Mk-58 Marine Smoke Markers	F12
G-900 Series Smoke Grenades	F13
LB-31 Camera Pod	F21
M-112/123 Photo Flash Cartridges	F22
LAU-10 Leaflet Dispenser	F31
GAU-2 Gun	G2
20 MM Gun	G20
25 MM Gun	G25
30 MM Gun	G30
.50 Caliber Gun	G50C
7.62 MM Gun	G762
M60 Machinegun	GM60
Mk-81 FF Inert	I81
Mk-81 SE Inert	I81A
Mk-82 FF Inert	I82

TYPE DELIVERY	DELIVERY CODE
CCIP	V1
Point Blank (Bore-sight/Pickle-Pull)	V2

b. Manual Deliveries

0° Bombs (Manual)	B0
5° Bombs (Manual)	B5
10° Bombs (Manual)	B1
20° Bombs (Manual)	B2
30° Bombs (Manual)	B3
45° Bombs (Manual)	B4
60° Bombs (Manual)	B6
5° Popup Bombs (Manual)	BA
10° Popup Bombs (Manual)	BB
20° Popup Bombs (Manual)	BC
30° Popup Bombs (Manual)	BC/D
Radar Manual Range Line	LØ
Labs IP	L1
Labs Target	L2
Conlabs	L3
Special Weapons Laydown	L4
Mining (Manual)	L5
5° Rockets (Manual)	R5
10° Rockets (Manual)	R1
20° Rockets (Manual	R2
30° Rockets(Manual)	R3
45° Rockets (Manual)	R4
60° Rockets (Manual)	R6
5° Popup Rockets (Manual)	RA
10° Popup Rockets (Manual)	RB
20° Popup Rockets (Manual)	RC
30° Popup Rockets (Manual)	RD

H.3 MISCELLANEOUS DATA RECORD CODES

The miscellaneous data subsystem of NAVFLIRS is utilized to capture and document miscellaneous training and utilization that is of importance to the individual aviator or his command, but is not documented elsewhere.

a. The miscellaneous code contains two characters. If the first character of the miscellaneous code is "N," "R," or "1," the data field will be numbers and tenths of numbers with an implied decimal between the second and third characters.

b. Below are the listed miscellaneous data codes:

DATA	CODE
Number of Autorotations	A1
Number of Rounds Fired	F1
Logistical Movement W-79 8" Arty Rounds	L1
Logistical Movement B-33 8" Arty Rounds	L2
Logistical Movement B-48 155 MM Arty Rounds	L3
Logistical Movement B-54 SADM	L4
Logistical Movement B-43	L5
Logistical Movement B-57	L6
Logistical Movement B-61	L7
Night Vision Device Usage (other than low light)	N1
Night Vision Device Usage (low light)	11
SUA not utilized because of cancellation of flight operations	N2
SUA canceled because of weather	N3
SUA canceled because of maintenance action	R1
SUA canceled by air traffic control	R2
Future Use	12
Future Use	13
Covered Radio-Successful Check In	21
Covered Radio-Unsuccessful Check In	22
Future Use	31
Future Use	32
Future Use	33

APPENDIX I

Support Codes

I.1 SUPPORT CODES

SUPPORT CODE	ACTIVITY NAME	SUPPORT CODE	ACTIVITY NAME
AL	COMNAVAIRLANT	MR	MARINE RESERVE (CG FOURTH MAW)
AP	COMNAVAIRPAC	MW	COMCABWEST
CN	CNATRA	MX	HMX-1
FL	COMMARFORFLANT	NA	COMNAVAIRSYSCOM
FP	COMMARFORPAC	NS	COMNAVSAFECEN (PEP)
ME	COMCABEAST	RE	COMNAVRESFOR

APPENDIX J

Marine Codes

J.1 ASSIGNED SYLLABUS CODES

SYLLABUS	SYLLABUS CODES
A-4 Pilot	7501
RF-4 Pilot	7545
A-6 Pilot	7511
A-6 B/N	7583
EA-6 Pilot	7542/7543
EA-6 EWO	7584/7588
AV-8 Pilot	7508/7509
F-4 Pilot	7522
F-4 RIO	7587
F/A-18 Pilot	7521/7523/7527
F/A-18 WSO	7524/7525
C-9 Pilot	7551
CT-39 Pilot	7559
UC-12 Pilot	7555
KC-130 Pilot	7557
OV-10 Pilot	7576
OV-10 Aerial Observer	9960
Qualified Observer/ Gunner	9916
AH-1 Pilot	7565
UH-1 Pilot	7563
CH-46 Pilot	7562
CH-53 Pilot	7564/7566
KC-130 Navigator	7372/7380
KC-130 Radio Operator/ Loadmaster	7381/7382
KC-130 Flight Engineer	6031/6032
KC-130 First Mechanic	6016
UH-1N Crewchief	6174
CH-46 Crewchief	6172
HH-46 Crewchief	6167
CH-53 Crewchief	6173
MV-22 Crewchief	6175

J.2 MARINE SYLLABUS STATUS CODES

a. C — Conversion Syllabus — The syllabus provided for air crewmen converting from one model aircraft to another within the specific aircraft type (i.e., CH-46 to CH-53 or F-4 to F/A-18).

b. F — Full Syllabus — The standard instruction prescribed for newly designated air crewmen to become full-combat qualified (sometimes referred to as the first tour or replacement aircrew (RAC) syllabus).

c. R — Refresher Training — The syllabus to be flown by air crewmen who have not flown the model aircraft in which refresher training is to be conducted within the previous 12 months. Refresher programs to be flown by air crewmen with differing backgrounds and assignments are outlined

APPENDIX K

CNO (N889) Approved IFAR Simulators

K.1 NAVY SIMULATORS (PILOT AND NFO SPECIAL CREW TIME)

SIMULATOR DESIGNATION	SIMULATOR TYPE	AC/TYPE	TYPE EQUIP CODE
2C63B	OFT	TA-3B	VABJ
2F90	OFT	TA-4J	VACM
2F108	OFT	A-4M	VACS
2F114	WST	A-6E	VAEG
2F122	NCLT	A-6E	VAEP
2F131A	OFT	A-6E	VAEQ
2F156A	WST	A-6E SWIP	VAEB
2F119A	WST	EA-6B	VAEH
2F143	OF/NT	EA-6B	VAEY
2F84B	WST	A-7E	VAFB
2F103	NCLT	A-7E	VAFJ
2F111	WST	A-7E	VAFK
2F107	OFT	KC-130R	VCMB
2F152	OFT	KC-130T	VCME
2F110	OFT	E-2C	VEBG
2F166	OFT	E-2C	VEBE
2F144	OFT	E-6A	VECA
2F55J	WST	F-4S	VFPP
2F88	WST	F-4S	VFPL
2E6	ACMS	F-14A	VFUJ
2F95	OFT	F-14A	VFUE
2F112	WST	F-14A	VFUF
2F153	MFT	F-14D	VFUA
2F154	WST	F-14D	VFUB
2E7	WTT	F/A-18	VFYA
2F132	OFT	F/A-18	VFYB
2F136	WST	AH-1T/W	VHTK
2F106	WST	SH-2F	VHBA
2F145	WST	SH-2F	VHBE
2F158	WST	SH-2G	VHBF
2F64C	WST	SH-3H	VHCL
2F64D	WST	SH-3H	VHCT
2F117B	OFT	CH-46D	VHRH
2F117	OFT	CH-46E	VHRC
2F117A	OFT	CH-46E	VHRF
2F172	APT	CH-46E	VHRM
2F121	OFT	CH-53D	VHUA
2F120	OFT	CH-53E	VHUD
2F141	OFT	MH-53E	VHUC
2B42	FIT	TH-57C	VHSH
2F135	OFT	SH-60B	VHZB
2F139	WST	SH-60B	VHZW

K.2 NAVY SIMULATORS (NFO SPECIAL CREW TIME ONLY)

The following simulators are suitable *only* for substitution of special crew time.

Note

Pilots must occupy a pilot station to log pilot time.

SIMULATOR DESIGNATION	SIMULATOR TYPE	A/C TYPE	TYPE EQUIP CODE
15F13	TT	A-6E	VAEC
15E22C	TTT	EA-6B	VAER
15F8A	TT	E-2C	VEBJ
15F8B	TT	E-2C	VEBK
15C4E	PTT	F-4J/S	VFPK
15C9A	MCOT	F-14A	VFUC
2F64C(T)	TT	SH-3H	VHCL
14H8	TT	SH-3H	VHCS
14B51	WTT	SH-60B	VHZC
14H9	TTT	SH-60F	VHZV
2F66D	TT	P-3A	VSAL
2F69D(T)	TT	P-3A/B	VPBK
2F69E(T)	TT	P-3B	VPBV
2F87(T)	TTT	P-3C	VPBF
2F87A(T)	TTT	P-3C	VPBN
2F87B(T)	TTT	P-3C	VPBW
2F87C(T)	TTT	P-3C	VPBI
2F140(T)	TTT	P-3C	VPB6
14B49	TT	S-3A	VSBB
14B50	TT	S-3A	VSBF
14B49A	TT	S-3B	VSBK
1D23	TT	GENERIC	VNAC

MCOT — MISSILE CONTROL OFFICER TRAINER
PTT — PART-TASK TRAINER
TT — TACTICS TRAINER
TTT — TEAM TACTICS TRAINER
WTT — WEAPON TACTICS TRAINER

A/C TYPE	SIMULATOR TYPE	LOCATION	TYPE EQUIP CODE
GENERIC:	FIXED WING	US AIR FORCE	V1AF
	HELO	US AIR FORCE	V2AF
	FIXED WING	US ARMY	V1AR
	HELO	US ARMY	V2AR
	FIXED WING	US COAST GUARD	V1CG
	HELO	US COAST GUARD	V2CC
	FIXED WING	FOREIGN	V1FM
	HELO	FOREIGN	V2FM
	FIXED WING	NASA	VZBW
	V/STOL	NASA	VZAV
MFS	FIXED WING	PATUXENT RIVER	VZBX
MFS	V/STOL	PATUXENT RIVER	VZBY

Change recommendations to approved simulators may be made by letter to CNO (N889F2A), Washington, DC, 20350-2000.

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